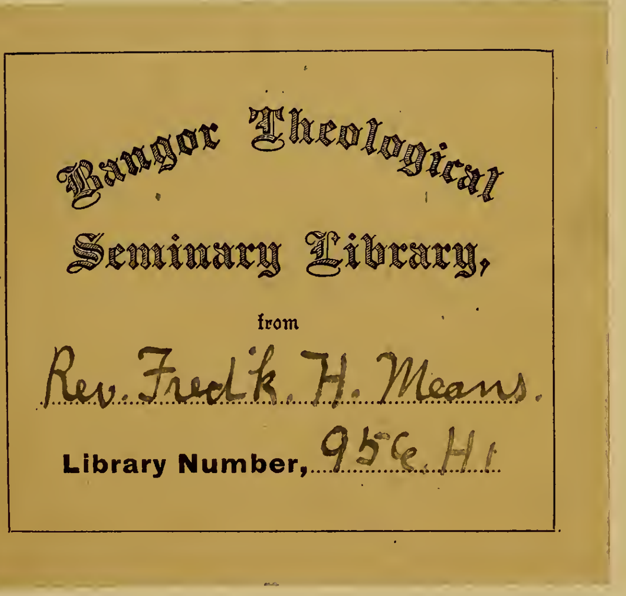
RECONSTRUCTION IN TURKEY

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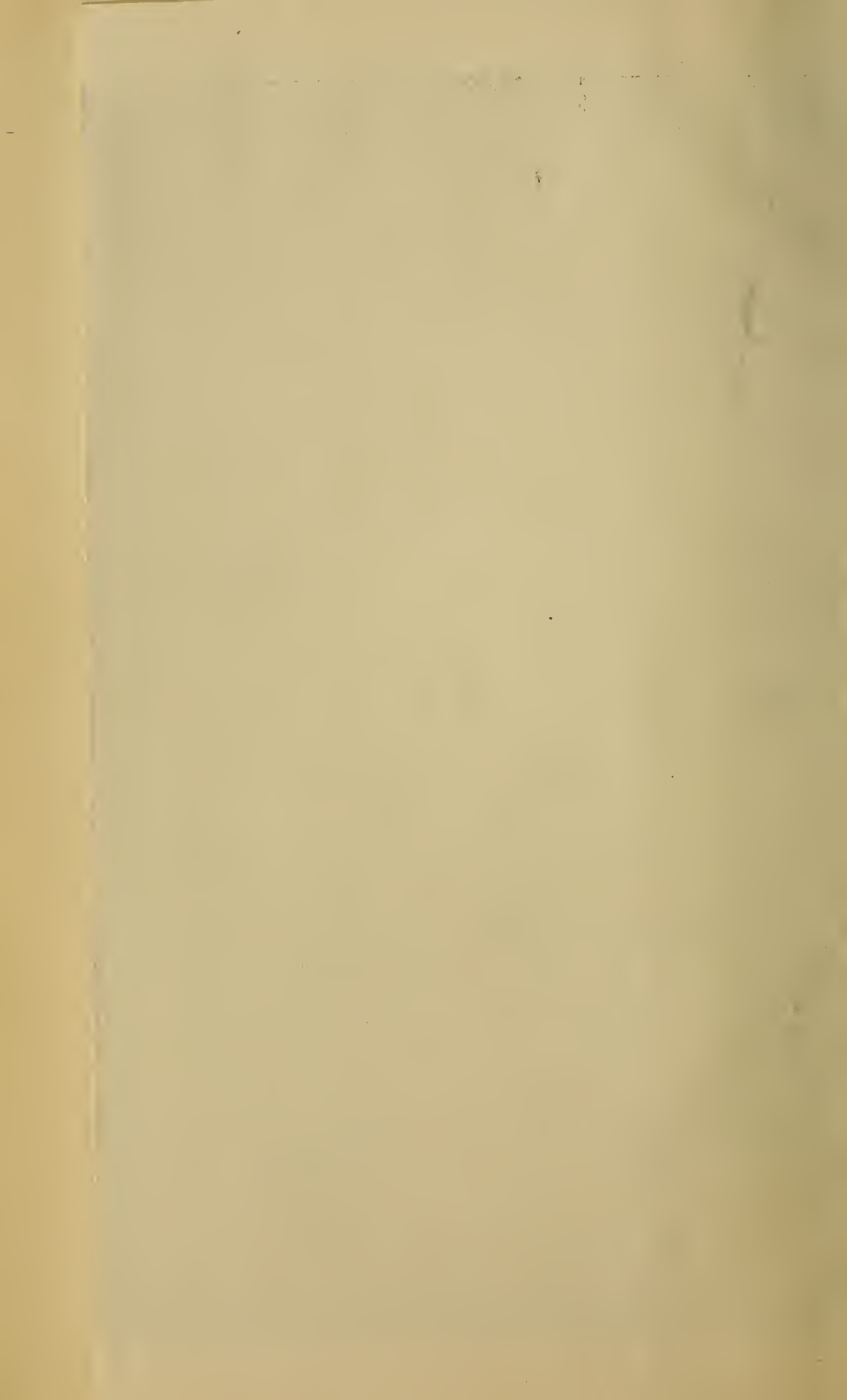
REV. CORNELIUS HOWARD PATTON

CORRESPONDING SECRETARY
AMERICAN BOARD OF COMMISSIONERS
FOR FOREIGN MISSIONS
BOSTON, MASS.






RELIEF MAP
OF THE
OTTOMAN EMPIRE
SCALES
Horizontal 1 inch = 14 miles
Vertical 1 inch = 10 miles
DISTRIBUTION OF NATIONALITIES
TURKS
ARMENIANS
ARABS
CONSTANTINOPLE
SEA OF MARMORA
Gallipoli
Panderma
Brusa
Ereqli
Batum
Erzerum
Sivas
Smyrna
Konia
Adana
Alexandretta
Aleppo
Harput
Diarbekr
Urfa
Mosul
Hamah
Homs
Tripolis
Beirut
Damascus
Haifa
Jerusalem
Alexandria
Port Said
CAIRO
CYPRUS
Famagousta
RHODES
SAMOS
MEDITERRANEAN SEA



RECONSTRUCTION IN TURKEY

A SERIES OF REPORTS

COMPILED FOR

THE AMERICAN COMMITTEE OF ARMENIAN AND SYRIAN RELIEF

1 Madison Avenue, New York City

WILLIAM H. HALL

Editor

For Private Distribution Only

1918

To Dr. James L. Barton, Chairman,
American Committee of Armenian and Syrian Relief,
1 Madison Ave., New York City.

Dear Sir: —

The Sub-Committee appointed in October, 1917, to conduct a survey of information on conditions in the Turkish Empire begs herewith to submit its report.

The Committee gathered its information largely from those Americans who have spent the greater part of their lives in Turkey, either as Mission workers or as teachers in the American colleges. This information was then distributed under a number of heads as indicated in the table of contents and handed to specialists in the different lines who have prepared the final reports.

These reports are based upon the material furnished by the Committee but supplemented by the investigations of the individual authors. In some cases the information which the Committee was able to supply was meagre and the report was then made up largely from the specialists' own research.

Space would not permit the preparation of an exhaustive report on any one subject but it is believed that the information contained is reliable and sufficiently ample to give a comprehensive idea of conditions and possibilities in Turkey.

It was felt to be important to gather this information now in order that at the conclusion of the war it might be immediately available as a basis for reconstruction work as well as for the guidance of those friends of the Near East who desire concise and reliable information on present conditions as well as on the resources and possibilities of the Turkish Empire.

This report has been made possible only by the cooperation of those men and women who, through long years of work in Turkey, have gained first hand knowledge of the conditions. The Committee cannot overstate the value of their assistance nor the willingness and kindness of those busy men who have so generously con-

tributed their time and talents in the preparation of the final reports. We also gratefully acknowledge valuable assistance received from the American Geographical Society.

Respectfully submitted,

H. A. Hatch,
William H. Hall,
Sub-Committee.

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BIBLIOGRAPHY

The following list of twenty-five books is not by any means a complete list of the works written about Turkey but they will give a comprehensive view of the history of Turkey together with the political and social conditions.

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OUTLINE OF THE HISTORY AND ETHNOLOGY OF THE TURKISH EMPIRE.

Harvey Porter.

The Turkish Empire is regarded as having its beginning at the accession of Othman, or Osman I, who reigned from 1288 A. D., although he was not sultan until some years later on the death of his suzerain, Ala id-Din, of the Seljûk dynasty. His people called themselves Osmanlis after him and have disliked the term Turk as applied to them. They were not the first tribe of Turks to appear in the West for the Seljûks had preceded them by some 300 years.

They both belong to the great family of Tartar nomads who ranged the steppes of central Asia from time immemorial and have often poured their hordes into the West. The Seljûks became prominent in the middle of the 11th century, when they overthrew the Bagdad caliphate, in 1055. They overran all Western Asia and finally settled down and founded the kingdom of the Seljûks in Asia Minor with Konia (Iconium) as their chief capital. It was these Turks with whom the warriors of the first Crusade came into contact in their progress through Asia Minor and Syria. They were much weakened by the wars with the crusaders and were finally overwhelmed by the Mongols when the Ottomans appeared as allies and saved them from destruction at the time but ended by succeeding to their dominion. We hear of these latter in the region of Erzingan, in Armenia, before the middle of the 13th century. They were a small tribe and when they migrated into Asia Minor they probably did not number more than 400 families. They were granted the district about Angora by Ala id-Din and given permission to conquer whatever lands they could in the dominion of the Byzantine empire.

Othman laid the foundations of the Ottoman power in western Asia Minor, and his successor, Orchan, extended it and made Brusa his capital. He instituted the corps of the Janissaries by taking a thousand young boys from among his Christian captives every year, instructing them in the Moslem faith and training them as

soldiers. They were allowed to have no associations with their kin and were taught to look to the sultan as their father and patron. They became his body guard and the most efficient fighting machine of that age. The whole Ottoman clan was a race of warriors, living by plunder and booty, even after they gave up their nomadic state.

Orchan reigned from 1326 to 1359 and consolidated his power in western Asia Minor and prepared the way for his successor Murad (Amurath) I, (1359-1389), to extend his dominion into Europe. He took Adrianople in 1361 and made it his European capital which it remained until the fall of Constantinople nearly one hundred years later.

During this period the sultans were extending their power in both continents, in Asia subduing the fragments of the Seljûkian kingdoms, the most important of which was Karamania, and the outlying provinces of the Greek empire on the shores of the Black Sea, and warring with the Slavic kingdoms in Europe and the Hungarians. Servia and Bulgaria became subject but in Asia Murad's successor, Bayazid I, suffered a complete defeat at the hands of Timûr in 1402 when his army was destroyed and himself taken prisoner. The contentions of his sons made anarchy for ten years when Mohammed I (1413-1421) re-established the Ottoman power and a new and more glorious period of conquest ensued.

The fall of Constantinople in 1453 brought consternation to the powers of Europe but no unity of action and the tide of Ottoman conquest went on though not so rapidly until the accession of Selim I (1512-1520) who directed his attention to Asia. In a single campaign he wrested from the Persians the districts of Diarbekr and Kurdistan and in another he subdued the Mamlûks of Egypt and took from them Syria and then Egypt (1516-7). When in Egypt he compelled the titular Abbaside caliph, who was residing there with only nominal authority, to resign his title which was assumed by Selim and from that time on the Ottoman ruler has added the title of caliph to that of sultan.

Under Suleiman I (1520-1566) the empire reached the zenith of its power and glory. He extended his power over Hungary and threatened central Europe but he was checked at the siege of Vienna in 1529 and met with disaster at the hands of the knights of Malta in 1566. Although the sultans who followed were degenerate

scions of the Ottoman race, the empire had gained such prestige that the decay which set in was not manifest in its outward relations for some years and it continued to flourish apparently for a century or more.

Once again the tide of conquest reached Vienna, in 1683, when it was besieged by Kara Mustafa, the Grand Vizir of Mohammed IV, but was delivered by the valor of the inhabitants and the aid of John Sobieski, king of Poland. The Ottomans were driven off with heavy losses and never again reached so far, and from that time their boundaries began to recede.

At its widest extent the empire embraced all Western Asia and vast territories in Europe and Africa. It extended from the confines of Austria and the Adriatic to the borders of Persia, from the Caucasus to the deserts of Africa. The Black Sea was a Turkish lake and the Tartars of southern Russia obeyed the commands of the sultan. The eastern Mediterranean and its southern coast lands even to the straits acknowledged his suzerainty; an empire of more than two million square miles in extent and with a population of some 50,000,000, comprising twenty or more different languages and dialects.

The control of such an empire required great political sagacity as well as power, but the Turks were never distinguished for political wisdom and when internal decay set in the empire began to disintegrate. The decline became evident in the latter part of the 17th century and in the following centuries it became more and more rapid. Hungary was lost in 1699; in 1739 Russia took Azov; the Crimea in 1783; in 1793 the Black Sea littoral as far as the Dniester and in 1812 Bessarabia. Servia became autonomous in 1817, Greece gained her independence in 1829 and at the same time Wallachia and Moldavia secured autonomy under the protection of Russia.

The heaviest blow was struck by his vassal Mohammed Ali, of Egypt, who revolted and sent an army under his son Ibrahim into Syria who defeated the Ottomans in three pitched battles in 1831 and was advancing on Constantinople when sultan Mahmûd II called in the aid of Russia which rescued him from destruction but at the cost of becoming almost a vassal of the Czar, requiring him to close the Dardanelles to all nations in case Russia should be involved in war. His rebellious vassal of Egypt received Syria

and the province of Adana as the reward of his revolt. But England and France refused to recognize this treaty and Russia had to give it up after Mahmûd had vainly tried to recover Syria and Egypt and been again defeated by Ibrahim.

Turkey seemed on the point of dissolution when England and France stepped in and saved her. It had become the policy of these powers to maintain Turkey as a buffer against Russia. This led to the Crimean war of 1855-6 which neutralized the Black Sea. But Ottoman misrule continued and produced revolts and consequent massacres which brought Russia once more into action against Turkey as the protector of its Christian subjects. The Bulgarian massacres alienated the western powers and left Turkey at the mercy of Russia in the war of 1877-8 and, although the treaty of San Stefano was modified by that of Berlin, Russia retained Kars in Asia and Bulgaria was made autonomous and later became independent in union with Eastern Roumelia. Bosnia and Herzegovina were placed under Austria for administration; Cyprus under the English. Rumania, Servia and Montenegro were already independent, Algiers and Tunis had fallen to France and in 1911 Italy occupied Tripoli and the Balkan war of 1912 took away the rest of Turkey in Europe save Constantinople and Adrianople.

The revolution of 1908 promised great things for the renovation of Turkey but failed completely in bettering the condition of the remaining provinces. Misgovernment has been as evident under the Young Turks as ever under the old regime. They have shown no capacity for reform.

Ethnology of the Turkish Empire.

Turks.

The Turks are a minority of the inhabitants of the empire, even in Asia, though they outnumber any other race. Out of some 20,000,000 they count about 9,000,000. They are not all Ottomans by descent, probably the larger number are descendants of the Seljûks and other Turkish clans who immigrated into Asia Minor both before and after the Ottomans. They are found chiefly in Asia Minor but about a million are in Europe and a considerable number in northern Syria and Mesopotamia.

The Ottomans were few when they invaded the empire but they

increased rapidly by absorbing other clans and by taking many women of their captives into their harems. Besides, many of the Christian Greeks were led to become Moslems, and gradually coalesced with the Ottomans. The Janissaries, as we have said, were recruited from their captives until 1680 when their own children were enlisted. This increase of the Turks was at the expense of the purity of the race so that the Ottomans are today of decidedly mixed blood. Especially is this true of the imperial family. The Sultans have rarely taken Turkish women into their harems; they usually preferred female slaves from the subject races, notably the Circassians, so that the house of Othman is far from being of pure Turkish blood.

The language reflects the mixed character of the race. The grammatical structure is Turkish but the vocabulary is chiefly Arabic and Persian with a mixture of other dialects. This is particularly true of the literary Turkish the reason for which is obvious. When the Turks invaded the lands of the caliphate they were wholly illiterate and had no alphabet. They adopted Islam as their religion and the Arabic alphabet for writing. Naturally they took their religious and scientific terms from the Arabic and Persian, which were to them the sole channel of literary culture. Thus the written Osmanli tongue is little more than Arabic and Persian words cast into Turkish grammatical form. The dialect of the common people is purer Turkish and far removed from the official Osmanli. The Turkish belongs to the agglutinative type, designated as Ural-Altaic, which expresses grammatical relations by suffixes, so that foreign words are readily accommodated to the Turkish idiom.

The Turks of Asia are largely of the peasant class. The early invaders were a band of warrior nomads but when they became established in the empire they settled down on the lands they had conquered. Their military character has always been their leading characteristic and in this they have excelled. The Turk has ever been a good soldier when well led and for centuries he was the terror of Europe. He has never manifested any capacity for business and trade. The Turks seem to have little ability in forming business combinations. Scarcely any leading mercantile houses are Turkish.

When the Ottomans settled down to husbandry they adopted a feudal system somewhat resembling that of Europe but more stable

since the feudal lords rarely rebelled against the sultan, as did the lords of Europe against the kings. The Turk has always been obedient to his military superior and all to the sultan who, since Selim I, has been both civil and religious head, sultan and caliph. The Janissaries often became insubordinate and rose against the sultan, but even they respected the House of Othman and never ventured to set up a ruler from any other family.

The Turkish peasant, like the soldier, is patient and long-suffering, enduring without mutiny the ills of his lot and the injustice of his rulers. In times of peace he dwells peacefully with his Christian fellow subjects and it is only when aroused by fanaticism and spurred on by authority that he becomes a savage brute. He shows little tendency to change and contentedly pursues his course, allotted to him by fate.

The governing class have never shown ability as rulers of subject races and latterly have acknowledged this by endeavoring to exterminate them. Almost all of the officials who have manifested capacity have been men who had little Turkish blood. Of 48 Grand Vizirs of note during four centuries only twelve were of Turkish ancestry, the others were Armenian or Greek by descent. The Turks have had to depend on these races for their business and finance and in destroying them they are bringing upon themselves financial ruin.

Greeks.

The Greeks are found chiefly in Constantinople and the coast districts of the Black Sea, the Aegean and the Mediterranean. There are no reliable statistics as to number, but perhaps they are somewhat more than a million in all, or were before the war. They are largely engaged in commerce and trade in which they far surpass the Turks. The history and literature of the Greeks are too well known to need recounting here. The modern representatives of the race have not shown any great capacity for government if we may judge from the history of the Greek kingdom since it gained independence. Business ability they have but it is coupled with craftiness and lack of integrity if we may judge from the accounts of travelers among the Greeks of Asia. This may be in part accounted for by their having to deal with a rapacious government, ever ready to plunder and penalize the prosperous and rich by heavy exactions.

Armenians.

The Armenians in former times occupied the northeastern portion of Turkey in Asia but they are now dispersed throughout Asia Minor, northern Syria and Mesopotamia and in Constantinople, or were at the beginning of the war. A large number are found in the district of the Caucasus, under the dominion of Russia, and they have been added to by many fugitives from the late massacres. The estimate of their number in the empire before the war ranges from 1,500,000 to 2,000,000, but they were not in a majority in any vilayet.

Their history goes back to the earliest times, as we find mention of them on the Assyrian monuments. They passed under the rule successively of the Assyrians, Persians and Greeks and had enjoyed the distinction of furnishing a king to Syria on the downfall of the Seleucids. This was Tigranes (Dikran) who was compelled to submit to the Romans in B. C. 66. Tiridates, who reigned in the latter half of the third century A. D., accepted Christianity and most of the nation followed him. The Armenian church was first connected with the Greek but became separated in 491. In 632 Heraclius brought the kingdom under his sway but it was conquered by the Arabs in 636 and it passed under the authority of the caliphs, one of whom, Mu'temid, gave Armenia a native king in 885 and his dynasty continued on the throne until 1079.

Upon the downfall of the caliphs of Bagdad Armenia was overrun by Seljûks and Mongols and almost ruined by Timûr. Many of the people were compelled to accept Islam and the country was dominated by the barbarous Kurds. After the defeat of the Persians by Selim I, in 1514, Armenia was included in the Ottoman empire and has thus remained although Russia has taken the Caucasus district which includes many Armenians and the seat of the catholikos. Thousands have taken refuge there during the war.

The fate of the Armenians under Turkish rule has been deplorable. Constantly subject to the raids of the savage Kurds and oppressed by the government they have suffered massacre time and again. Multitudes have left their homes and wandered into other parts of the empire and to other lands until only a minority are left in Armenia itself. They have shown a fortitude and constancy under persecution rarely exhibited. They were the earliest nation to become Christian and have, as a nation, steadily adhered

to their faith, thousands suffering martyrdom for it. They have shown remarkable tenacity in preserving their individuality as a people and of rapidly recovering from every disaster, resembling the Jews in this respect. Like them also they have largely taken to trade and to even a greater extent than the Greeks have become the bankers and financial agents of the empire. Their ability in this respect has led the government to employ them in important positions notwithstanding their jealousy and fear of them. They have acquired a far larger portion of the wealth of the land, in proportion to their number, than the Turks and this has excited the cupidity of their masters. These various evidences of superiority have led to oppression and massacre. But there is no doubt that the action of the powers in befriending the Armenians after these outrages has accentuated the animosity of the Turks against them and led to the design of exterminating them. They have sought to abolish the Armenian question by abolishing the Armenians.

The character of this people presents various defects as well as good qualities. They differ much in different parts of the empire. The peasants of Kurdistan are ignorant and degraded because of their subjection to the Kurds and the frequent outrages they have suffered. The wonder is, not that they are degraded, but that they have been able to exist. Those who have migrated to other parts of the empire, and especially to foreign lands, have shown their ability to rise. A goodly number have occupied high positions, both at Constantinople and Cairo. Intellectually they are second to none of the races of the empire. But with all this they have too often been crooked and untrustworthy in business relations, like the Greeks, since the same causes have operated to induce this character in them. The oppression and rapacity of Turkish officials have cultivated in them the tendency to protect themselves by deceit and falsehood. But when they have been educated and trained under favorable conditions they have shown not only great ability but integrity and rectitude.

Kurds.

The Kurds are regarded as of the Scythian stock and identified with the Carduchi mentioned by Xenophon who dwelt in the northern portion of the Assyrian empire and were given to raiding and plundering much as the mountain Kurds of the present.

The latter are not confined to Kurdistan but are found in Persia to the East, and have spread into Asia Minor and north Mesopotamia. They number more than a million and a half and are all Moslems, largely nomadic still, but many are pastoral and dwell in villages. The latter are hardly distinguishable from the Turks; but the mountain Kurds are tribal, divided into clans under chiefs of their own who show little respect to Turkish authority beyond paying the tax upon their flocks. Their tongue is Aryan with a considerable admixture of Semitic and Turanian elements. They passed under the successive dominion of the Assyrians, Persians, Macedonians, Parthians and Arabs and caused much trouble to the caliphs of Bagdad. Their most flourishing period was in the 12th and 13th centuries when Saladin and his successors, of the Ayyûbite line, made them famous. They came under the sway of the Ottomans when Selim I defeated the Persians in 1514 A. D. He appointed Ildris, the Kurdish historian, to organize his people who installed the tribal system which continued until 1828-9, when a revolt occurred which the Turks had to quell by force. Their chief, Bedr Khan, revolted in 1843 and Obeidallah in 1880-1 which indicates their semi-independent and unruly character. Their raids on Moslems and Christians alike should have called for severe measures of repression but they have been treated leniently and employed by the government to keep the Armenians in check.

The Kurds are not a wholly illiterate race; they have translations of some of the Persian poets into Kurdish besides the New Testament and some other religious works. There have not been wanting men of distinction among them, such as Saladin the compeer of Richard of the Lion Heart and Idris the historian. This man, a linguist of the first rank, who was employed to assist the translators of the Bible into Turkish, was a Kurd. He was equally at home in Kurdish, Persian, Turkish and Arabic. Kurds have sought instruction in the missionary institutions and have shown a fair amount of intellectual ability.

Arabs.

The Arabs have had their home in Arabia from time immemorial, from whence they issued in the seventh century and spread over Syria, Mesopotamia, Persia, Egypt and North Africa, crossed the straits into Spain and threatened all Europe. They are

a remarkable race, distinguished for having given to the world a religion second only to Christianity in importance, and in the Dark ages of Europe they were the depository of learning and gave it the germs of modern civilization. Their language is the chief representative today of the Semitic tongue, rich in history, poetry, philosophy and works of the imagination. In deeds they easily stand first among the races of the empire, save only the Jews in the matter of religion. Their number at present is comparatively small, perhaps six or eight millions of pure blood, but their more or less mixed descendants in Syria and Mesopotamia are numerous.

They are aliens to the Turks whom they have never regarded with favor. They do not forget that the Turks overthrew their caliph and usurped his title when they invaded Egypt. They have never acknowledged the validity of the claim of the sultan to the caliphate and assert that it belongs to them and the Hejaz has now repudiated him. The tribes of the desert have never yielded more than a nominal fealty to the sultan and have often been in open rebellion. The Wahhabîs set up an independent state in the 18th century and later captured the Holy cities. The Porte was unable to subdue them and had to call in the aid of Mohammed Ali pasha of Egypt who sent his son Ibrahim to reduce them, but when his father rebelled against the sultan they recovered a large part of Arabia and were not finally put down until 1842. The Moslem element in Syria also has been restive under the Turks and since the revolution has been demanding autonomy for the Arabic speaking peoples of the empire. This has aroused the ire of the Young Turks and many leaders of the movement have been executed.

The Arabs differ much in customs and culture. The Bedawîn of the desert are still nomads, scarcely touched by modern ideas, while the Arabs of the towns have a good degree of culture, and many of their descendants in Syria and Egypt have introduced much of Western literature into the modern Arabic. The race is undoubtedly capable of great things. Their past history shows this and they will have to be reckoned with in any reconstruction of the Near East.

Syrians.

Taking the term Syrian in a purely geographical sense we have a very mixed population, Arabic in language, but largely of non-Arab and non-Semitic stock. The ancient Syrians were chiefly

Semitic, but after the time of Alexander there was a large influx of Greeks, during the Greek period, and of all the nations of Europe during the crusades. While the prevailing characteristics of the Syrians are Semitic they have much to connect them with Europe and the Christian portion of the population has been largely moulded by Western ideas. The Syrians do not number more than 2,500,000, probably, of whom something less than half are Christians and Jews, both of whom have been sensibly diminished by the war. They have furnished the progressive elements of the population, manifesting a great desire for education and a capacity for culture which indicates that they would play a leading part in the reconstruction of the land if not too much reduced by war. The Syrians as a whole are too much divided into antagonistic sects, however, to give much hope of that unity of thought and purpose which is necessary to form an independent state.

Jews.

The Jews are too well known to require any extended notice. Their number in the empire may be half a million, distributed very widely, residing chiefly in the towns where they are artisans or traders. In the last half century there has been a large immigration into the Holy Land, promoted by the Zionist movement, and these immigrants have founded colonies and engaged in agriculture with much success. They have come chiefly from Russia and those countries where they have been oppressed and there is no doubt they will colonize Palestine still more largely, should conditions become favorable, and make it once more the home of the Jews.

Circassians.

The Circassians, or Cherkesses, had their original home in the western Caucasus, whence they emigrated into the Turkish empire rather than submit to the Russians. The defence of their independence under their chief Shamyl brought them prominently to the notice of Europeans. Being Moslems they were readily received by the Porte and settled in Asia Minor where they are widely dispersed. They were promised lands but the promise was not fulfilled and they took them by force, which was acquiesced in by the govern-

ment, though they plundered both Moslems and Christians in the process. Colonies of them are also found in Syria. They are generally feared by their neighbors on account of their truculent character but where they have been well settled in agricultural pursuits they have manifested a more peaceful disposition and are fairly prosperous. They are noted for their fine physique and their women especially for their beauty. Their former custom of selling their daughters has introduced many into the Turkish harems. Many of them have thus found their way into the harem of the sultans in former days.

The Lazes.

The Lazes are a small tribe found in the region of Trebizond. They are akin to the Circassians but of lower grade. They are represented as brutal and inclined to violence and outrage and have often figured in the massacres that have occurred in the region of Trebizond, Baibert and Erzrûm.

In the mountain region back of Smyrna there are some small tribes of Moslems variously called Xeibecks, Avshars, Youruks, etc., who have led the life of brigands and been a terror to the whole region, putting to defiance all law and order. Occasionally when their depredations have been too outrageous the government has sent troops to restrain them but has failed to exercise any permanent control so that usually the country around Smyrna has not been safe for travelers. Many have been taken by them and held for ransom.

RELIGIOUS CONDITIONS IN THE TURKISH EMPIRE.

Harvey Porter.

Any view of conditions in the Turkish Empire would be defective without an examination of the religious question. Religion has been in the past a most important element in the politics of Turkey and cannot be ignored in any plan for future reconstruction. Religious fanaticism has played a large part in the history of the empire and has by no means ceased and must be reckoned with. The leading religious divisions have, of course, been Moslems, Christians and Jews, but these have been sub-divided into numerous sects which have been far from peaceful in their relations to each other and have led to serious political complications and often to bloody conflicts.

The Moslems naturally claim consideration first as being the most numerous and the ruling class. The Ottomans accepted the Moslem faith before they came to power and have, from the first, held to the doctrine of the Sunnis, or the traditional faith generally regarded as orthodox. They accept the Coran as authoritative and also the traditional legislation of Mohammed and the early caliphs which are the basis of civil as well as ecclesiastical law. Hence their system of government has been, in effect, a theocracy; the sultan, at least since the time of Selim, being head of both Church and State, as were the caliphs from the beginning. But a large body of the Moslems of the empire have been loath to acknowledge the right of the sultan to the caliphate which they claim belongs of right to the Arabs. The latter have generally acquiesced as they were unable to resist successfully, but the Wahhābi revolt in the 18th century and various uprisings in Arabia have manifested their discontent. The Shi'as and Druses have also resisted Ottoman rule and have submitted only to force.

The Shi'a sect is the largest and most important of the sects of Islam which are regarded as heretical by the orthodox. Their origin goes back to the early days of the caliphate. It arose when Ali, the husband of Fatima, Mohammed's daughter, was chosen caliph. His election was regarded as invalid by a strong party

and a conflict ensued in which Ali lost his life by assassination and the Ommiad dynasty was established on the throne. But the followers of Ali refused to submit and induced Hosein, son of Ali, to set up the standard of revolt. This led to the tragedy of Kerbela in which Hosein and most of his little force were slain under most cruel circumstances, which embittered his adherents to the utmost and made a martyr of Ali. His followers became the sect of the Shi'as, or Shiites, who have always been bitterly hostile to the Turks as Sunnis. Sultan Selim I attempted to exterminate them within the empire. In 1514 he gave secret orders to his subordinates to fall upon them, all in one day without warning, and massacre them. As usually happens in such cases, the execution of the decree was impossible, and although some 40,000 are said to have fallen victims there were many who escaped and became bitter enemies of the sultan. This act led to a war with the Persians, the great majority of whom have always been Shi'as, in which they were defeated. Many wars between them have followed and the enmity is still kept up, though the number of the Shi'as in the empire is not large and they have not often risen in revolt. There is quite a large number of villages of them in Syria, where they are called Mutāwili, and have no more intercourse with the orthodox Moslems than with the Christians and are perhaps even more hostile to them. They number, perhaps, some 50,000.

Other branches of the Shi'a sect, with varying differences in doctrine, are the Druses, Nusairis and Ismailiyis. They all agree in having certain secret tenets and rites and belong to the class denominated Batinîyis who accepts the Coran as their guide but interpret it in a mystical way which leads to doctrines that are wholly at variance with the letter and abhorrent to the Sunni Moslems. These doctrines are held in secret and hence the designation of Batinîyi, that is, possessing inner light, or illumination.

Of these Batinîyis the *Isma'iliyis,* formerly known as the order of Assassins, followers of the Sheikh el-Jebel, or the Old Man of the Mountains, are the most famous in history.

The order was founded in the latter part of the 11th century by a certain Hasan bin - Sebâh who was imbued with the doctrines of the Batinîyis and became a preacher of them, first in Egypt and afterwards in Syria and Persia. He gathered his followers

in a mountain fortress in the northern part of Persia, called Alamut, and from there he sent forth his emissaries all over the Moslem world. These men were devotees who put implicit faith in his teaching and were consecrated to any service he might require of them, even to the assassination of princes or anyone whom the Sheikh ordered them to kill. He thus became a terror and scourge to all western Asia. During the Crusades a branch of this sect was established in Syria, under a chief named Rāshid ed-Din Sinān, who terrorized Moslems and Christians alike and furnished assassins to either party without distinction. He came into conflict with the famous Saladin against whom attempts at assassination were made several times until Saladin was compelled to make concessions to him on condition that he should be let alone. The sect continued until the middle of the 13th century when it was wiped out in Persia by the Mongols and a little later the Syrian branch was nearly exterminated by the Egyptian sultan Bibars. The remnant has continued to exist with its center at Masyaf where their sheikh resides. They are called Isma'iliyi but the government reckons them as Moslems though known to be heretical. They are truculent and inhospitable and troublesome to the authorities and unfriendly to any except their own sect. They are supposed to number about 20,000 but there may be many more scattered throughout Syria, living in disguise, for all the Batinîyis are allowed to assume any religious guise they please when among people of other faiths.

The *Nusairi* sect take their name from Nusair who lived in the latter part of the 9th century, but their distinguished teacher and apostle was Hosein bin Hamdan ul-Khasîbi who flourished in the beginning of the 10th century. They were prominent in Syria in 1029, occupying the mountain range along the coast to the north of the Lebanon which is still known as the Nusairi mountains. They also inhabit the region about Mersine, in the province of Adana and number altogether about 200,000. They are divided into two communities; the Shemsîyeh and the Kamarîyeh, or sun-ites and the moon-ites, probably reflecting the heathen elements in their cult which they seem to have inherited more than the other heretical sects of Islam. They hold that the Deity has been seven times incarnate, the last time in the caliph Ali to whom they ascribe all the attributes of the godhead and seem to really worship him.

The Nusairi, like all the Batinîyis, conceal their beliefs from the uninitiated, and do not teach their esoteric doctrines to all of their own sect, only to those who have passed through a long course of instruction. They acknowledge Mohammed, but as second to Ali, and call him the Veil and they also honor one Selman al-Fārisi whom they denominate the Bab, or door. Of course the more enlightened among them would explain that they worship Ali only as the incarnation of the deity, as Christians worship Jesus Christ. They believe in transmigration and hold that Moslems, at death, become donkeys, Christians swine and Jews monkeys, while every faithful Nusairi rises at death to a position among the stars. Though they pose as Moslems to the world they often in secret curse them and have never willingly obeyed the Turks but have frequently resisted their authority and made trouble. All orthodox Moslems regard them as heretics and abhor their doctrines.

The sect of the *Druses* arose about end of the 10th century A. D. A certain adherent of the Batinîyis, named Darazi, appeared in Egypt in the reign of the Fatimide caliph el-Hākim, who from his acts seems to have been insane. Darazi encouraged him to claim divine honors and began to preach as exponent of the new faith. He is said to have migrated to Syria and gathered a community of believers in the region of Mt. Hermon. It is from him that the sect of the Druses is named but the teacher whom they especially honor was Hamzy who is said to be the author of the books that contain their secret doctrines and rites. These doctrines are guarded from the world with extraordinary care, even from the uninitiated of the sect. The initiated are called the 'Ukkal, the intelligent or wise, and have to pass through a course of training before being admitted to the order and to them is committed the exercise of religious rites and the direction of the affairs of the sect.

The common people are supposed to have little or nothing to do with the practice of their religion; *that* is attended to by their leaders, to whom they are taught implicit obedience. This forms them into a compact body so that whenever they have been called upon to act by their sheikhs their organized unity has been apparent. Such was the case when they arose against the Christians of Mt. Lebanon in 1860. Their superiority was at once manifested and they quickly bore down all opposition. Their number is

reckoned to be about 150,000, distributed over southern Lebanon, about Mt. Hermon and in Jebel ed-Druze in the Hauran with smaller communities in various other places. They have always been a militant body and troublesome to the government against which they have been in frequent revolt, as have the other heretical Moslem sects.

These all have a more or less political character, for in the system of Islam the religious leader is also the political head and whenever a new sect has arisen it has been an occasion of revolt against the constituted authority. This has happened repeatedly in the history of Islam, the most noteworthy instance in modern times being the revolt of the Mahdi in the Egyptian Sudan and the sect of the Senusi are today a standing menace to Egypt.

Of the various Christian sects in the empire the *Orthodox Greeks* are the most numerous and have been the most prominent in determining the policy of the Ottoman government toward the Christians in general.

When Mohammed II took Constantinople he realized that the Greek population was essential to the prosperity of the city, for in the hands of the Greeks were to be found all the facilities for carrying on trade and commerce and the means of production. The Turks were a military clan wholly unskilled in such things and with no inclination for them. Multitudes of Greeks had been slain in the capture of the city and other multitudes had fled to escape slavery but Mohammed set about restoring them to their homes, so that Constantinople might recover its prosperity. To this end he had them choose a patriarch to take the place of the former one who had perished in the siege and he gave him authority over his people in all matters connected with the church and promised to protect him and his people from violence and plunder. A certain number of churches were restored and religious worship in them was to be carried on as before. The patriarch and bishops were given full jurisdiction over marriage and divorce among members of their flocks and over matters of inheritance, with some restrictions, and they were allowed to levy taxes for ecclesiastical purposes and their customs were to be respected as far as consistent with subjection to the Imperial authority. The jurisdiction of the patriarch was to be absolute within these limits and the government would assist him in the enforcement of his decrees.

Moreover the collection of the military tax laid upon the Greeks by the Porte was to be in the hands of the church authorities so that the Turkish officers should come into contact with the Greek subjects as little as possible.

Thus was established a sort of *imperium in imperio.* This policy has had wide reaching results not anticipated at the time. The Sultan regarded the patriarch of Constantinople as the head of all his Christian subjects but as he and his successors extended their conquests they found various bodies of Christians that did not acknowledge the authority of this head, even of those who went under the name of Orthodox. There were three other patriarchs who claimed independent jurisdiction; those of Antioch, Jerusalem and Alexandria. Moreover there were several Christian communities who owed allegiance to none of them but to the pope of Rome. This required new arrangements, but the same principle was pursued in dealing with them as with the Orthodox. The ecclesiastical heads of these sects were recognized in the same way as the patriarchs of Constantinople and given similar authority, but their election must be confirmed by the sultan. In the case of the papal sects only the local heads were recognized.

The policy thus outlined has brought about wholly unforeseen results. The Christian subjects of the Porte have been taught to look upon their ecclesiastical heads as their immediate rulers and protectors and their allegiance has been primarily to them, or to their Church, and their feeling of loyalty or patriotism has been to them rather than to the sultan. Love of country as commonly understood has been wanting, as has been plainly demonstrated whenever the sultan was at war with other powers and especially in the events of the last few years. Also this policy has furnished occasion for the interference of foreign powers in the affairs of the empire in the interests of these sects, which have frquently invoked their protection. Besides, the segregation of these Christian churches has led to contentions among them and strife has not been uncommon which sometimes has called for interference on the part of the government. The contentions over the Holy Places in Palestine are well known.

Besides the Greek church, which is the most widely extended, there are the *Armenian,* which is practically confined to the Armenian people, and the *Maronite,* which is predominant in Syria, and

the *Syriac* or *Jacobite* and the *Nestorian,* the last two being confined chiefly to the northeastern portions of the empire. All of these churches, except the Maronite and Nestorian, are divided into two branches, one branch being united to Rome and called Catholic or Uniate. Thus we have the Orthodox Greek and the Greek Catholic; the Gregorian Armenians and the Catholic Armenians; the Jacobite or Syriac and the Syrian Catholics. They differ very little except in the adherence of the Catholics to the Pope. They are much fewer in number than the bodies from which they separated.

The *Maronites* are the most numerous in Syria, somewhat outnumbering there the Orthodox Greeks who come next. They were organized as a church by John Maro in 685 on the question of the doctrine of the Monothelites which was rejected by the Orthodox but accepted by the Maronites. When they united with Rome in 1182 they abandoned this heresy. Their patriarch is chosen by the bishops but has to be confirmed by the pope as well as by the sultan. They number perhaps 300,000 and are found mostly on the Lebanon to the north of Dog River. The Greek Orthodox in Syria are somewhat less but are distributed throughout Syria and Palestine. The Greek Catholics are about half as numerous. The Jacobites are from 100,000 to 150,000, found chiefly in northern Mesopotamia, and the Nestorians in the mountains of Kurdistan number about 100,000. The Armenians are now so decimated that it would be difficult to estimate the numbers of the Gregorians or the Armenian Catholics but if the fugitives are restored they will probably form the most considerable body of Christians in the empire.

The *Jews* are distributed widely through the empire, residing chiefly in the towns, engaged largely in trade but many also being craftsmen. In Palestine they have recently established agricultural colonies aided by their brethren in Europe and America. These are not subjects of the empire but those in other parts generally owe allegiance to the sultan. The number of these it is difficult to estimate but they cannot be more than half a million and probably much less. They have their own ecclesiastical organizations, recognized by the government like those of the Christian sects. It is only in Palestine that they have any political significance where the Zionist movement aims at a re-occupation of the country by

its ancient inhabitants. This prospect would have to be considered in any reorganization of the empire.

This outline of the religious conditions in the empire reveals the complexity of the question and the difficulty of dealing with it from a political point of view. This difficulty does not lie in the great number of sects; a greater number can be found in America; but in the age-long antagonisms under which they have existed and their lack of cohesion in any political sense. The political life of the non-Moslem population, so far as it has had any, has been circumscribed by the sect to which the individuals belong; they have had no part in the political life of the empire. To a large extent this has been true of the heretical sects among the Moslems and to some degree among the Arab Moslems. Hence the people have never been accustomed to act together in political matters and it would be difficult to bring them to do so. There was great hope at the time of the revolution in 1908 that a real union of these antagonistic elements for the general good might be brought about, but the result was a dismal failure. This was due no doubt to mismanagement on the part of the Young Turks, who never intended to commit the control of affairs to the people, but had they done so the deep seated prejudices of the sects and the underlying current of fanaticism still existing, even among the Christians, would have proved an almost insurmountable obstacle. It is doubtful whether the different races and religious sects can be moulded into one body politic capable of controlling its own affairs without a long course of education and training.

EDUCATION IN THE TURKISH EMPIRE.

Samuel T. Dutton.

Introductory Statement.

Asiatic Turkey, in its political, religious and social developments, presents a problem that is at once complex, confusing and difficult to interpret. There is so much segregation of interests due to the relief, climate, and national differentiation of populations that it is not easy to make general statements or to compare one unit with another. Even those who have resided many years in the Ottoman Empire usually have knowledge which is bounded by the province in which they dwell and by the particular field of activity to which they are committed. In thinking of bringing portions of the empire under different national conditions, as suggested in the recent statement of Lloyd George, or the assurance given in the recent declaration of President Wilson that other nations now under Turkish rule shall have unmolested opportunity of autonomous development, it becomes necessary to inventory, as it were, the various factors which operate here and there to affect the life of the common man and the common woman. There is the Turkish government with its Mohammedan faith ruling over Christian peoples who are potentially more than their equals and who, through education and enterprise, have advanced far beyond the state of the average Moslem population. Then there are different languages, as Arabic, Greek, Armenian, Turkish and so forth.

An attempt to understand and evaluate the different systems of education is in itself a problem of exceeding difficulty. We have to consider what the Turks themselves have done in promoting lower and higher education, as well as the community systems of the Greek, Armenian and French Catholic churches. We also must take into account the great work done by the two American Boards of Missions, namely the Presbyterian Board in Syria and the American Board in other portions of the empire. And in these American educational efforts we have a sum total of result surpassing in value that of any other group.

It should be understood that in the case of Armenian, Greek and French Catholic school systems, where politics and religion are absolutely one, we find in the case of each system a high degree of both political and educational autonomy. In this interplay of Turkish and sectarian politics we have a situation almost unlike anything to be found in other parts of the world. The Ottoman power tolerates the community government and educational work of these sects, and in some instances seems almost to do so under compulsion. While there is considerable clashing in the operations of this complex system of government, the lines of cleavage are fairly well established and each religious sect has a good degree of independence in regulating local and domestic affairs. When the Armenians, who have constituted the most progressive and competent group in the entire empire, in any locality are seen to have gained possession of much of the property and utilities of the region, it has been the Ottoman policy to instigate a massacre as a means of curbing this enterprise lest it become a menace to the safety of the empire.

The American missions have enjoyed a good degree of freedom both in their religious and in their educational work. They have not, since the earlier years of missionary effort, addressed themselves so much to the Moslems as to the Christian populations. Upon the advent of the missionaries in the early part of the last century, they found these ancient churches very decadent, and their adherents, including the priests, quite ignorant and given over to formalism and ecclesiastical ceremony with little of vital teaching. Through the influence of American missionaries and teachers, social progress and education have been greatly stimulated so that in later years and even in times of war the Turkish government has undertaken to establish both lower and higher schools, especially in the great centers of population like Constantinople, which in normal times would mean much for the welfare of the nation. It may be said in passing, that in recent years the German government has sent professors and teachers to Constantinople who have measurably failed because they could not use the Turkish tongue.

It will be seen from what has been said and from what is to follow, that proposals looking to the initiation by any outside power undertaking to exercise protection over non-Moslem populations

must be considerate of traditions, aims and methods of present systems, and must also be patient, progressive and beneficent in all that it undertakes. Current social conditions growing out of the war, and especially the ill treatment of Christian populations, give added emphasis to the need of this special humanitarian treatment. In regions where the people have been deported and to a large extent massacred, and where homes have been devastated and property carried away, there will be a demand for social and economic rehabilitation and for education which favors self-government and self-support and a high degree of co-operation on the part of the various religious groups, as well as a growing readiness to be guided, supervised and possibly subsidized by the protecting power. Should any nation or group of nations undertake to reconstruct and re-establish some one of the areas in question, we could justly expect that the task would be undertaken with only one purpose in view, namely, to help the people as fast as possible to become self-governing; to break down as far as possible the barriers of religious prejudice and bigotry which separate the different sects, and to secure their just co-operation in working out a new modern practical scheme of education which should reach every home, give new zest and ambition to all workers, stimulate agriculture and industry and bring about those conditions which should prevail in a modern civilized community.

Conditions affecting Education before the War.

The economic, political and social conditions of the Ottoman Empire have for generations been notoriously bad. They have naturally had a direct bearing upon education. Under the old regime, which lasted until 1908, every sinister influence of an unjust and oppressive government conspired against progress in any form and the six short years between 1908-1914 served only as a very small beginning at reform, while the three last years have put back for a decade any attempt at establishing a universal system of education, with the exception of a series of German schools maintained by the Germans since the war.

Under the old regime, the sultan himself openly discouraged all forms of native education. By harsh laws he kept teachers in constant terror of the infringement of government measures, by a strict and unreasonable censorship he excluded many valuable

books and information from schools, and by fostering discord among the various religious sects and races in his Empire, he kept them in a constant state of friction and irritability.

The political situation during the whole of his reign could not have been worse. He pursued a definite policy to maintain the people in a state of poverty and ignorance. For this purpose he kept a swarm of spies in his service. Farms in the interior of Asia Minor, a land rich in arable ground and undeveloped mines, could not yield anything like their potential wealth. There was no modern machinery for agriculture, no money for the poor to invest, no security for farmers against periodic raids of Kurds and Arabs from neighboring mountains and desert, who carried off whole crops, which often represented months of hard labor. Life and property in Asia Minor and the remoter parts of the Empire were alike insecure. Imprisonment threatened Moslem, Armenian or Greek if he appeared to prosper more than was seemly. Laws governing importing and exporting were so arbitrary as to kill many flourishing industries and take away any commercial ambition the people might have. At every turn, progress was openly blocked.

Social conditions were no better, for they naturally depended entirely on political and economic conditions. Poverty in the interior led to housing conditions which were filthy and dangerous in the extreme. Transportation was very poor as there were hardly any roads in Turkey passable except in the summer months. Railroads were few and far between. No steps were taken to guard public health and epidemics of cholera, typhus and smallpox constantly broke out and do to this very day. In the low plains near Adana, as in other places, maleria is rife. This might be entirely overcome by draining the mosquito-breeding swamps. Typhus and cholera are brought by hordes of pilgrims to Mecca, who pass through the principal towns each year.

The only alleviating circumstances in this deplorable situation, were, first, the attitude of toleration of the Turkish Government towards the Christian races in allowing them to pursue their own religion and to establish their own schools, and second, the extraordinary privileges granted to foreigners under the name of "Capitulations." The first helped to keep alive the educational and religious ideals of the Christian races of Turkey. While they were

hampered on every side, their schools flourished after a fashion and illiteracy was never as prevalent among the Christians as among the Moslems. By this act of contemptuous toleration, the Government was defeating its own ends, for while in the vilayet of Konia, for instance, the illiteracy among Moslems was 90%, the Christian villages each had their small schools, poor perhaps, and very much restricted, but still making the percentage of illiteracy much lower. Because of the fact that foreigners could enjoy such unusual privileges — as immunity from search and taxes, liberty to travel about the country at will and many others — a great many foreign schools were established, the French Jesuit schools and colleges, and the American mission institutions being the most conspicuous, though there were German, Russian, British, Italian and Spanish as well. No matter how much the Sultan might object, the "Capitulations" as well as influential Embassies protected these foreign powers and through their educational agencies, a great deal of enlightenment was brought to the people of the Ottoman Empire. The scope and nature of these institutions as well as the native institutions will be dealt with below.

It must be remembered as an important fact that the large cities of Constantinople, Smyrna and Beirut always have enjoyed much greater educational facilities than the towns in the interior. This is somewhat true also of coast towns like Trebizond, and Mersine. A note must also be made of the Lebanon, a portion of Syria under foreign protection. Here life and property were secure and education progressive.

The Young Turk party, which overturned the despotic rule of Abdul Hamid in 1908-09 was, in its early days, zealous in its intentions for reform. All conditions, political, economic, social, educational were to be improved. Let it be said, with due respect that much was accomplished, even though the Young Turk party has since fallen into such bad repute. The strict censorship was abolished, there was freedom of press and speech, a competent gendarmerie was established, public security and welfare at least were aimed at, and direct appropriations for education were made. The Government, early in its campaign for reform, sent a band of young men abroad for education, two to Paris and five to Columbia University. These five young men have proved good students and three of them have obtained degrees of Doctor of Philosophy. A

notable interest in education for women was one of the outcomes of the new order, as shown by the fact that in 1914 the Government supported fourteen Moslem girls at Constantinople College. While the Young Turk policy left much to be desired, while the administration was open to criticism, and while the Balkan wars had left the people exhausted physically and financially, the outlook for education, before the Great War, was hopeful. New schools for both girls and boys had been established, an Ottoman University had been given a new lease of life in Constantinople, students including Moslems as well as Christians flocked to the foreign schools and there was a definite movement on foot to establish a comprehensive system of education. With the bettering of the political situation, and with greater freedom of action and speech, it was felt that improvement in education was imminent.

Educational systems in the Ottoman Empire.

For the purpose of this paper, we will only give such statistics as roughly to present the extent and volume of the heterogeneous systems of education as they exist today. No accurate census of the Ottoman Empire has ever been taken and all figures are merely approximate. Only those statistics concerning foreign institutions are entirely reliable. The total population of the Ottoman Empire in 1914 including Turkey in Europe, Asia Minor, Syria, Mesopotamia, and Arabia approximated 21,273,900 souls in an area of 710,324 sq. miles.

Turkish Education.

According to official statistics in 1911, the Government reported 36,230 schools and 1,331,000 students. This seems, from other accounts, to be much overestimated.

There is no well developed national education in the Ottoman Empire owing to the fact that large portions of the population belong to subject and non-Moslem races and the schools provided by the Government, while open to all, are Mohammedan and, as a matter of fact, are not patronized by the Christians.

The Turkish educational system is good in plan but poor in practice. It is founded primarily on the Educational Act of 1869 and a reformed Provisional Law drawn up in 1913. The Minister of Public Instruction is the responsible head and all the Moslem

schools, public and parochial, receive government aid. The plan provides for elementary education vested in two kinds of schools, lower primary and higher primary; for secondary education vested in a high school with a course from five to seven years and a college and university. The primary lower school is supposed to be attached to every village mosque and education is compulsory for boys from six to eleven, for girls from six to ten (this has been raised for boys from seven to sixteen years). The primary school curriculum is very simple, including ciphering, reading or reciting the Koran, Ottoman history, geography and object lessons on familiar matters. The higher primary schools have the following curriculum: Religious instruction, history, geography, Persian, Turkish and Arabic Grammar, geometry, drawing, bookkeeping, gymnastics and the language of the community.

The secondary school curriculum is founded on the above but includes the French language and literature, mathematics and science. Of these schools, however, there are lamentably few — only eighty-one in 1908. The trouble with Turkish education is, that it is mostly on paper. There is only one Turkish University situated at Constantinople. It was nominally founded in 1900 but was recently revived and includes five faculties, Arts, Theology, Medicine, Law and Science. The great bulk of the schools are of the lower primary order connected with mosques, though in practice many villages are entirely school-less. There is a large number of theological colleges connected with the mosques all over the country of which several important ones are at Konia and Constantinople. These are richly endowed and teach thousands of young men who are preparing for the priesthood. There are also several large military schools.

Education for women is in its infancy. Apart from the small village schools to which little girls may go up to the age of ten years with their brothers, there are very few schools for girls. A large high school in Constantinople and another, very recently founded in Beirut by a graduate of Constantinople College, are among the few. The courses in both of these are as yet very limited.

In Turkey, there is no conformity to examination standards as we find them in France, Great Britain or the United States. Teachers are obliged now to have Government certificates of capability before teaching but nevertheless they are often ignorant men.

The education of Turkish youth under the government is very inferior and does not begin to compare either in thoroughness or breadth with that offered at any of the foreign schools. Political pull and personal influence have a great place in securing teaching positions. The fact also that unscrupulous or incapable governors of remote provinces are immediately responsible for the education of their province, leads often to neglect and mismanagement.

Nothing has been done to establish under government control industrial or normal schools to any extent. Natives in Turkey, wishing to specialize are forced to seek training either abroad or in foreign schools established in their own country. What made matters worse under the old regime was, that Turkish youths were seldom allowed to leave the country for any purpose whatsoever. Government education so far has been merely general, with no practical value and lacking in breadth.

Armenian Education.

According to reports by Marcel Léart in 1913 there were 803 Armenian schools and 81,226 students. (All information here given states conditions before the war.)

The Armenian educational system is worthy of praise, for it has been maintained at great cost and against many obstacles. Love of learning has been a marked characteristic of the Armenian nation and while circumstances have hampered their working out anything resembling a complete system for themselves, they have never failed to embrace the opportunity for further study, when such was offered them. Owing to the peculiar situation of the Armenians as a subject Christian race of Turkey, it has not been possible for them to patronize the Mohammedan government schools. In order to have schools where their own religion and national ideals could be promulgated, they have organized a national school system of their own, taxing themselves for its maintenance. Headquarters are in Constantinople under the name of the Union of Armenian Schools. This provides for a network of schools all over the Empire closely connected with and largely supported by the Gregorian church. The elementary schools are free but higher education must be paid for in part by the students. It is noteworthy that nearly every village and town all over the country where Armenians live, has its national Armenian

school, while often Moslem government schools are entirely lacking.

The curriculum of the Armenian elementary schools is very restricted, but the students get a fair grounding in the reading and writing of their own language, in ciphering and in the church catechism and history. There are a number of higher schools for Armenian youths which are modelled after the French pattern and which give a very fair education in the liberal arts. A great point is made of languages, French being the dominant foreign language taught. There is an attempt at industrial education, as for instance, the agricultural school at Varag. Among higher schools for Armenians might be cited the Berberian College at Scutari near Constantinople.

The Armenian schools in Turkey have suffered mainly from inadequate funds and harsh restrictions imposed upon them by the Government. Up to 1908 no authentic history of Turkey could be taught and certain subjects were never allowed to be discussed. School teachers were always under suspicion and their teaching at times had to be so circumscribed as to be almost valueless. Since 1908 however, there has been much more freedom. The poverty of the country and the subsequent lack of ample funds for school management has led to the employment of inferior teachers. The school system is somewhat lax and the teachers inclined to favoritism. Standards of scholarship are low in many cases, owing to the fact that teachers have had no normal training, and have obtained the whole of their education within the confines of their province.

In considering the inferior quality of the Armenian national schools, two things should be borne in mind. First, that the system has always been greatly superior to the Moslem, and second that the Armenians have always had the great odds of poverty, prejudice, restricted opportunity and an unjust government to fight against.

Greek Education.

According to statistics presented by the Greek Patriarch in Constantinople there were, before the war, in Asia Minor, 1464 schools for boys with 135,884 pupils and 366 schools for girls with 48,684 pupils.

The present war, which has been marked by persecution against the Greeks, has entirely changed the status of Greek education in Turkey as will be shown below.

Until about 1913 Greek education might be considered as very similar to Armenian. The system was the same, national schools, supported by self taxation, with a strong religious tendency (orthodox in this instance), governed by a special board at Constantinople and directed by the Æcumenical Patriarchate. The Greeks had established about an equal proportion of schools throughout the Empire. They were fewer than the Armenian, owing to the fact that the Greek population was smaller. In the larger cities were several very excellent schools with curricula based on French schools. In comparison with the Armenian system, it might be said that the Greek schools on the whole averaged a higher standard and more modern methods, due to larger funds and less repressive laws.

The Greeks have strong religious and national instincts which were openly fostered by their schools. They were exceedingly proud of their traditions and had the schools of Greece to imitate and emulate. Their school system, while not equal to the foreign, met the requirements of the people fairly well.

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It would be well to introduce here a brief statement concerning recent Greek persecutions in Turkey which have vitally affected, not only their system of education, but their very existence as a race. While the Armenians have suffered the greatest of all persecutions, the Greeks have come in for a very large share and it is apparent to any student of recent events that the two persecutions were merely parts of a systematic scheme to get rid of the subject races of the Ottoman Empire, and to bring about a complete Turkification. The persecution of the Greeks began before the European War. In fact it started shortly after the Balkan wars, when Enver and Talaat came into power and conceived, at that early date, the diabolical plan of annihilating the Christian population of Turkey. The beginnings were small, but they steadily grew in ferocity, until with the outbreak of the Great War, the worst elements in the Turkish Empire were let loose to accomplish in a short time under the guise of military necessity, a scheme which no nation, not even Turkey, could have dared to carry out in peace times.

To begin with, the following means were used: First, abolition of special privileges; second, drafting of Christians into the army; third, taxation and commandeering of Greek property; fourth, Turkification; fifth, assassination and violence against individuals.

A direct blow was aimed at the educational system of the Greeks in July, 1915, which had been immune from all interference from the Ottoman authorities for many years. A series of regulations were imposed which transferred the authority of the Patriarchate to the Turkish directors, made obligatory the teaching of the Turkish language, and otherwise destroyed the individuality of the Greek system. There were like regulations enforced concerning the ecclesiastical jurisdiction (which in Turkey is almost synonymous with national jurisdiction) and privileges of the patriarchate in Christian communities.

These were, however, but preliminaries to the crowning act of persecution, namely, the deportation en masse of the Greek communities. With the exception of Constantinople and Smyrna, all along the Marmora and the Black Sea, where thriving towns and cities existed, the Greeks as well as the Armenians, were driven away. They were forced to travel days and nights without food or bare necessities. They were welcomed nowhere, but robbed on all hands and their misery and suffering were beyond description.

French Jesuit (Catholic) Education.

According to the statistics of the World's Missions for 1914 the French Catholics in Turkey maintained 500 schools and 59,414 students. (Most of their work has been abandoned since the war.)

The French Catholics have long been missionaries to the Christian nations of the Ottoman Empire and have established an extensive network of schools. Capuchins, Carmelites, Dominicans, and Franciscans have all founded educational and ecclesiastical institutions. So widespread has been their work that the group of Armenian and Greek Catholics is recognized as a separate entity by the Government as distinguished from the Armenian Gregorian and Greek Orthodox communities. So closely are religion and nationality interrelated that for an Armenian or a Greek to become a Catholic means the renunciation of certain national claims.

The French Catholic school system includes elementary and secondary education. The teaching is almost entirely in French

and the types of schools are founded very closely upon those of France. The main emphasis is on language. There are schools for girls maintained by French sisters, as well as for boys with priests in charge, though the latter are more numerous. The teaching has a decidedly religious tinge and much proselytizing is done though it is not an essential part of the program.

The curricula and standards of scholarship are good on the whole, though the moral tone is not as high as it might be and character building, which is made such an important item in other missionary institutions, is somewhat neglected. Young men are fitted for government positions as clerks, dragomen and interpreters. The young women are given some instruction in needlework and the domestic arts as well as excellent drill in the French language and literature and of course in Catholic history and religious formulas. In large centers, like Constantinople and Smyrna, before the war, there were many French schools, which owned excellent buildings and grounds in favored locations. In Bebek, a small village on the Bosphorus, the Catholics owned practically a whole hillside, with farm and dairy attached, and buildings, including a chapel, monastery, convent, orphanage, boys' and girls' school. This sort of equipment was typical of the security and prosperity of the French Catholics in Turkey, before the war.

British Education.

According to the statistics of the World's Missions for 1914 the British Missionary Societies in Turkey maintained 178 schools with 12,800 students. (The work has been abandoned since the war.)

The British missionary societies had, before the war, a fair number of schools dotted all through the Ottoman Empire. Their activity in Syria was more conspicuous than in any other part of the country. Elementary and ordinary high schools were more numerous than any others, though there were 3 normal schools and one industrial school. They did very good work and laid special stress on the teaching of morality and high standards of honesty and integrity.

Other foreign Education.

According to the statistics of the World's Missions for 1914 continental societies maintained in Turkey 38 schools and 3,500 students.

The other foreign schools in Turkey do not reach a very large number of the population, though their work is good. German, Danish, Russian and Italian are included under these. The schools are subsidized in all cases by religious societies in their respective countries, except German schools which now are given government aid as well. In the large cities, especially Constantinople, there are excellent German elementary and secondary schools, based upon the German system and making a great deal of language study and the teaching of mathematics and the exact sciences. The work is thorough and of a high grade. It should be mentioned that since the war, German schools have been planted in Turkey with great rapidity and there has been a steady influx of German teachers and professors not only into the capital but into the remoter cities of the Empire. German influence in military schools has been dominant for many years.

American Education.

According to the statistics of the World's Missions for 1914 the Americans maintained 675 schools in Turkey with 34,317 students.

Of all the foreign educational systems in the Empire, the American undoubtedly holds the first place. The French Catholic is larger but not more effective. Since the early part of the nineteenth century, American missionaries have been planting schools, hospitals, churches and colleges all over Turkey and today they are a great power in the land. The American Board of Foreign Missions, which operates in Asia Minor and northern Mesopotamia, and the Presbyterian Board, which confines itself to Syria, are the two principal societies, though there are several others. No foreign nation can claim so disinterested an attitude towards the people, Moslem and Christian alike, as can America. Her purpose in education has been entirely humanitarian and is entirely free from any political or commercial bias, which can be said of no other foreign nation in Turkey. This has been recognized by the Government as well as by the people and the Americans have in consequence enjoyed universal respect and esteem. They have been able to include in their schools, representatives of all the various nationalities found in the Ottoman Empire.

The American system of education in Turkey is more extended than any other and includes a larger variety of institutions. There are besides ordinary elementary and secondary schools, kinder-

gartens, normal, industrial and medical schools as well as theological seminaries and colleges. There are also small schools for the Blind and Deaf.

The equipment of these mission schools is varied, but on the whole, very good indeed. Professors, instructors and doctors connected with them are the representatives of the best universities in this country. The standard of scholarship is good and the curricula are based upon American ideas, but cleverly adapted to the needs of the country. For instance, a strong emphasis is put upon language study especially that of the vernacular, also the rudiments of science are given an important place.

While the mission schools and colleges fill a very important need, three American colleges under separate boards should be mentioned as embodying the very best that America has to offer to the youth of Turkey. These are the Syrian Protestant College at Beirut, Robert College and Constantinople College for Women at Constantinople. All of these are admirably equipped with modern appliances and facilities and all grant A. B. and A. M. degrees under charters from America. They represent the best institutions for higher education in the Ottoman Empire at the present time. They will naturally take the lead in any plans for a future educational system.

The Syrian Protestant College is virtually a university as it includes schools of medicine, pharmacy, dentistry, commerce, and arts and sciences. It has more than twenty buildings and draws upon a large Christian and Moslem population in Syria and Palestine. Roberts College has added a school of engineering to its well established collegiate course and while this school is in its infancy and will need years of peace to measure its full strength, it has made an excellent beginning and the need of such a technical school cannot be overestimated in a country like Turkey, where nearly all work calling for highly specialized training, has had, in the past, to be done by foreigners. Robert College in contrast to the Syrian Protestant College draws upon a Turkish instead of a Syrian population as well as large Christian communities, not only in the Ottoman Empire, but also in the Balkans. Constantinople College for women is the only college for women in the whole Empire and it offers the highest education obtainable. For nearly fifty years it has educated the young women who have become leaders in their several communities and has done an invaluable service in en-

lightening the women of the Empire in whose hands lies very largely the hope of the future. Eastern women have been neglected, sheltered and repressed. Constantinople College shows what can be done for the minds of women. Recently the College has started a series of courses in the practical arts, which in time will lead, it is hoped, to a School of Practical Arts. It is needless to emphasize the importance of this in connection with the period of reconstruction which is bound to come at the end of the war and in which the women will, of necessity, take a large part.

American schools have aimed very decidedly at a high standard of scholarship but their primary aim has been character building. Their training in morality and control has been their drawing card. Their discipline also has been much stronger than that of either native or other foreign schools. There has been some proselytizing among the Armenians but that is not the main object and the youth of all creeds who desire education have an equal welcome. An interesting fact is that already the Americans have established cooperation among different types of schools. Mission schools prepare their students for higher American schools or colleges. We find evidence of an attempt to make a graded system of education, beginning with the kindergarten and leading to the College. Industrial education has as yet made little headway in theory. Practical courses in arts and crafts however, are given in many of the schools.

Almost as much thought has been given by Americans to the education of girls and women in Turkey as to men and boys. A great many mission schools are educating girls on an equality with their brothers. This feature has been almost entirely neglected by the Government and has not been given as much thought as it needs by the other native school systems.

Altogether, the American educational system in Turkey has a widespread hold upon the land.

Comparative table of schools in Turkey.

System.	Schools.	No. of Students.
Turkish (Government),	36,230	1,331,000
Armenian,	803	81,226
Greek,	1830	184,568
Jewish,	....	......
Syrian,	....	......
French (Catholic),	500	59,414
British,	178	12,800
Continental (German, Danish),	38	3,500
American,	675	34,317

The direct and indirect effects of the war as influencing Education.

Historically, the Ottoman Empire has shown a capacity to endure defeat, humiliation and the exhaustion of war far beyond that of many other nations. This resiliency is due partly to the favorable climate and rich soil, and also to the primitive, simple and inexpensive habits of life which characterize most of the inhabitants. Turkey had taken part in two wars before the present one began, first, the Italian war and second, the two Balkan wars, in the first one of which she was badly defeated and practically driven out of Europe, Bulgaria being her most formidable antagonist. Because of the overthrow of Bulgaria in the second war by Serbia and Greece assisted by Roumania, the Turks were able to recover Adrianople, and, by the treaty of Bucharest, were allowed to hold a substantial strip of European territory. But these wars, in addition to the present great conflict, have sorely depleted her man power, made serious inroads upon her exchequer and, had it not been for the financial support of Germany, the government would have found it very difficult to maintain itself.

It can easily be understood that the general condition of a civilian population during the year 1914 was not good and has been growing worse ever since. Acting under the instigation and influence of the German Imperial Government, the Young Turks — and that probably means the little coterie of two or three who really control affairs — decided upon the most drastic, brutal and wicked deportation and massacre of the Armenian and Greek populations that has ever been recorded. In trying to inventory the civilized forces of the empire we have to give a large place to the Armenians. Before Asia Minor was conquered by the Turks the Armenians for centuries had held an important place as a nation surpassing most other nations of ancient and medieval times by their progress in education and the arts. Under Turkish reign they have been loyal, and so well was their ability in statesmanship and administration recognized, that throughout the whole period of Turkish rule they have held important positions in the government, and, in civil life, have been the most prosperous and competent people in the community. The banks, factories, trades, transportation and public utilities of Constantinople and Asia Minor have been usually directed by them. Evidently the young

Turks were persuaded that if they destroyed the Armenians they would be one step nearer having Turkey for the Turks and making the Moslem faith the supreme and only religion of the country. However that may be, in the summer of 1915 the scheme of deportation was begun and was continued until, except in Constantinople and Smyrna and adjacent areas, the Armenians from practically every town and village had been taken from their homes and made to march toward the desert. The male residents of the community were usually taken first, were sometimes mobilized for service in the army, sometimes were put in prison, but more generally were marched away a little distance from their homes and butchered. A vast majority of the men were thus disposed of. During the march to the desert the people were attacked and robbed in a merciless way; the women were constantly violated and the processes of extermination were so brutal that those who survived arrived at Aleppo and adjacent regions in a state of nakedness and absolute starvation. Thus the best human material in the empire was destroyed. The most carefully compiled statistics place the number of Armenians in Turkey before the war at from two and a quarter million to two and a half million. One hundred and eighty-two thousand fled into the Russian Caucasus and something over four thousand into Egypt. It is believed that nearly one-half of this entire number have lost their lives, while two-thirds of the remainder have been for the past two years in a state bordering on starvation. The American Committee for Armenian and Syrian Relief, with the aid of the Lord Mayor's fund of London and the Russian government, have been able to care for and save a very large number of the sufferers in the empire as well as in the Russian Caucasus and in Persia. It is assumed that perhaps one-half or something over one million of the Turkish Armenians remain alive, including those who fled over the border. Another crime committed by the Turks in their insane determination to cripple if not destroy the Christian populations was their treatment of the Syrians, especially that large community resident in Mount Lebanon. By unjust taxation and by the seizure of all food stuffs and supplies, this worthy people was brought also to a condition of abject suffering and distress, and has been the object of relief from American sources. It is not yet known how many have perished but from most authentic reports it is believed that nowhere in the empire has there been so large a percentage of deaths from starva-

tion. Now, during the past two years, the Turks have deported the Greeks in Northwestern Asia Minor from their homes under conditions of great suffering accompanied by starvation and massacre. So in thinking of reconstruction with respect to education in Turkey, we have to face the fact that the best and most enlightened peoples have to a large extent been persecuted and destroyed.

Consequent upon the facts stated above and because of the war, educational institutions have been for the most part interrupted and schools and colleges have been closed. This is true, naturally, of all institutions supported and conducted by allied peoples, and it has gradually come to be true of American institutions, except in Smyrna and the three independent colleges in Constantinople and Beirut. In the case of some of these American institutions, Armenian teachers and professors were either massacred or deported. Some may have escaped. It may be said in connection with the three independent colleges, namely Robert College, The Constantinople College for Women and the Syrian Protestant College in Beirut, because of the high cost of living they have considerably curtailed their work.

The need of an Educational Revival in Turkey.

There should be an educational revival following such rehabilitation as is necessary to make it possible for the people to live and pursue their usual vocations. The first universal need is a better system of elementary education which shall give young children good foundations in the rudiments, and some industrial training adapted to the environment in which they dwell. The American schools, which have undoubtedly been the best thus far, have used the English language in all classes as the basis of teaching and have also taught the language and literature belonging to the province, as the Arabic in Syria, Armenian in Armenia, Turkish in Anatolia and Greek in Smyrna. In the other communities the language of the province only is used. If in the lower, as well as in the higher schools, there could be gradually worked out a scheme whereby some common language like the English could be learned by all the pupils, many advantages would result. The people would have a common bond of interest and the literature of England and

America would be available in the form of books and periodicals. What has been said about the need of better elementary schools applies to practically all the higher schools and colleges. At present the American higher institutions have been to some extent models to other schools, especially in ethical training and in those things which make for culture of the spirit. These qualities of education are so universal and important, that they need to be emphasized in all places where people are backward and where by oppressive government a knowledge of the ideals and customs of the more civilized portions of the world have been kept from them.

Attempts at educational reform in any part of the empire would have to face conditions which are now almost unspeakable. The best people have been eliminated. The Moslem population in all provinces is essentially ignorant and have not yet been affected either by government or church schools. The Turkish nation resists the idea of manual labor; is not progressive and does not reach out for education. In this respect the Turks are in great contrast to the Armenians, Greeks and Syrians who, whatever the difficulties may have been, have made considerable progress in reducing illiteracy through elementary and higher schools.

The need of vocational and practical Education.

First, Education for the Home. — The schools should provide such training in domestic arts and household economy as is adapted to the needs of the people; that is, the processes of sanitation, hygiene, economy in foods and clothing, the construction and equipment of the home and other details affecting the health, comfort and thrift of the people should be given an important place. This of course means teachers who are competent to teach these subjects. That points to the necessity of normal courses in the colleges and higher schools and special normal schools.

In civilized countries like England, France and the United States, studies in the domestic arts as well as vocational subjects are added to existing curricula which have been worked out through many years of painstaking effort. In Turkey, whether in Syria, in Armenia or Mesopotamia, the curricula as a rule are yet lacking in breadth and richness and are too little adapted to the common needs of the people. Courses of study both for children and adults

should in the immediate future emphasize the industrial side and should tend to improve social and economic conditions. In view of the high death rate caused by bad sanitation,* unhealthy conditions of life and inferior medical practice, it becomes necessary to strike hard for such fundamental things as health in the home as well as for light, air, pure water, drainage and the care of the sick.

Second. In addition to domestic training and practical handiwork in the elementary schools for the sake of the home and for the inculcation of industrial ideas, there should be a recognition of existing industries and, in every community, attempts should be made to teach such trades and occupations in the schools as will foster these pursuits. There can be no good government or prosperous civic life unless the people as a rule are able to support themselves comfortably and so can provide themselves with food, clothing and shelter. Reference is made here to the other papers of this Report. With this material before us, it is not necessary to point out the diversification of industrial life, growing out of the climate, relief, fertility of soil, proximity to the sea and special aptitudes of the people as determined by the customs of many generations. Everywhere there is need of training in agriculture, forestry, stock-raising, and certain departments of horticulture. Because of the exceeding fertility of the soil, the possibility of irrigation and the ready demand for agricultural products, an investment upon the part of a protecting government in vocational education would bring large returns. When it comes to the training of the teachers for such special work, it should be done under a general scheme for the sake of economy and efficiency.

Third, Professional Education. — A Medical Practice and Nursing. The Syrian Protestant College at Beirut supports schools of medicine, pharmacy and dentistry which are the peers of such institutions in Europe. It has connected with it a school for the training of nurses. There is a Turkish hospital situated at Haida Pasha very near Constantinople which has gained considerable distinction. There are nine hospitals and ten dispensaries under American management in Turkey. There were also, before the

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*READ —"Health and Sanitary Conditions in Turkey" in this volume.
"Conquered by Dirt and Disease" Pamphlet by Alden R. Hoover, M. D., of Cæsarea, Asia Minor.

war, a good many hospitals conducted under foreign direction. As shown in the paper on Sanitation there is a fearful prevalence of contagious disease and a vast deal of sickness caused by unsanitary conditions. There is a great need of a medical college in connection with Constantinople and Robert Colleges as well as for a hospital to supplement it. Dr. A. R. Hoover, whose experience in Turkey is extensive, recommends a polyclinic building to be located near the heart of the city. He also proposes branch dispensaries and clinic rooms in various sections of the city, as at Stamboul, Galata, Pera, Scutari, etc. The Rockefeller Foundation has instituted a survey of the Ottoman empire with special reference to medical instruction and that survey is available and may be referred to in connection with this report.

B. Another field for new activities in education is training in civil, mechanical and mining engineering. There is a large field for men thus trained in road building, drainage, water-supply, irrigation, the lighting of cities and homes, transportation, etc.

C. An equally important need is the training of teachers not only in general pedagogy but in special lines of domestic and vocational work. Until within a very few years there have been no trained teachers whatever in Turkey except in a few of the colleges. This is not saying that there have not been excellent teachers, for the men and women who have been sent out by the several mission boards have been persons of such good general culture and character that they have taught well the subjects in which they had been educated. Within the last five or six years teacher training classes have been organized in some of the American colleges.

In order to insure a scheme of normal training adequate to the situation there should be sent out from America and Europe after the war a small army of the best equipped persons to be found, who should undertake to organize work in existing institutions and establish other centers so that the idea of a crusade for economic, agricultural and industrial uplift, as well as for the rehabilitation and improvement of homes, can be pushed forward with efficiency and dispatch. An important feature of this undertaking should be the training of workers in various trades and other branches of skilled labor as is done in the continuation schools of Munich or the Danish rural high schools.

Political reconstruction as affecting Education.

A. Administration. — This report taken in connection with the other chapters shows the complex, many sided nature of education in Turkey and gives some hint of the way in which political and ecclesiastical authority operate in their administration. In regard to American schools little need be said in this connection. They are domestic as far as this is possible. They have broad humanitarian ends and know how to co-operate not only with each other but even with other systems in the same community. Should a protectorate be established over some portion of Turkey, it would be necessary to face difficult and trying questions growing out of the conflicting and competing aims of the several racial and religious groups. Of course it would be necessary at first to give them all free play and aid them to elevate their standards and improve their methods; but any government having a sense of the value of unity and economy of effort would wish gradually to centralize authority and bring about more uniform standards and methods. It would seem that a government with beneficent and philanthropic purposes could bring the various nationalities to unite in such matters as training of teachers and provision for higher vocational education as well as training for the professions and for public service. In case it were possible to subsidize education, it would be easier to help inaugurate helpful supervision and more tolerance toward each other of the religious sects. Certain it is that there would have to be entire impartiality in handling the administrative problem. Moslems and Christians would have to be treated alike, as it would be essential to the welfare of the community that all should have equal opportunities.

One of the first important undertakings would be to bring to bear skilled ability to reestablish and improve existing industries, or those which did exist before the war, and to insure new enterprises in manufacturing, mining, agriculture, etc., appropriate to the environment. If some success were attained in this direction the schools and industries could then react upon each other so that children and adults would be interested in the same problems and could develop together. The plan of having pupils devote part time to the shop or the field and the remainder of their time to the school, has worked exceedingly well in this country and ought to be a feasible method among backward peoples.

A government undertaking a beneficent scheme of rehabilitation and education will succeed according as those who are appointed to administer and supervise the undertaking are unselfish, tactful, energetic and patient. A considerable number of men and women should consecrate themselves to this work and be willing to follow it for a considerable term of years, as they would need to learn something of the language of the province and become thoroughly acquainted with the people and their history, their peculiar beliefs and habits.

B. The Support of Education. — In the past, the several ecclesiastical communities have supported their own schools, while the American schools have been supported by mission boards. The Turkish government has only supported its own schools. Some system of aid for the various school systems would be desirable, not merely to increase their efficiency but to make them more directly a help in the general socializing process which education is expected to promote. The Allied Nations, having expended billions of money for the war and having sacrificed many thousands of their best youth, could well afford to invest some millions in a scheme which would restore a devastated country, many of whose people have been grossly treated for centuries, and thus lay the foundations for a new, progressive, democratic state.

C. Standards and Curricula. — A government wise enough to know what education should accomplish for the people, could properly fix standards of knowledge and attainment appropriate to different stages of educational progress. These standards would be recognized in all schools and so all curricula would have a certain unity, not to say uniformity of aim. All teachers in a given grade would know that they were working shoulder to shoulder with other teachers. As students passed from a lower to a higher school they would have substantially the same qualities. The desirability of this would appear when they might meet in the college or university. As heretofore suggested, and in view of the high importance of making all education of practical worth, all higher vocational education should be adapted to the region and should be planned to give immediate practical help to self-support and productiveness.

D. Legislation. — It would be necessary to make a complete separation of church and state, and the civil government thus set

free would legislate in such a way as to permit all teachers and all educational instrumentalities to be free and unhampered by the vagaries of ecclesiastical tradition or form. This does not imply that religion is not to be taught, but it means simply that in a general way the government itself is to provide for the proper examination of teachers, make laws concerning attendance, sanitation of school houses, protection from fire and uniform length of school year, day, etc.

Conclusion.

It would not seem wise, neither would time permit the preparation of separate statements for Armenia, Syria and Mesopotamia. The emphasis which has been placed upon adapting means to an end and upon recognizing the peculiar geographical and economic conditions of any area, should be a sufficient caution in considering the proposals made in this report. No system of education existing in the world can be transplanted to Turkey. There is much to be learned from the schools of Switzerland, Great Britain, France, United States and, better than all, from Scandinavia. But in undertaking to rebuild a country where neglect, ignorance, squalor and incompetence have reigned, and where in addition, the best of the inhabitants have been deported, persecuted and impoverished, a new, original and very considerate scheme must be applied.

Moreover, the future of any section of Turkey must be an evolution from existing forms and environments, taking into account the century long forces of oppression, practices and habits. The broad common sense and flexibility seen in the school systems of some of our American communities are suggestive of the ideal which one would like to see helping, let us say Armenia, to work out a new and creditable destiny. Recent declarations from official sources regarding the restoration of nationalities imply that the peoples belonging to a race or a nation who by the political manipulations of the past have been torn apart, should be brought together, reunited and thus given a good chance for security and self-development. As illustrating the one class of difficulties which will have to be met, reference is made to the laws issued by the Turkish government for providing schools in 1916, a copy of which is appended to this report. In the present chaotic state of affairs in Turkey, in Armenia, in the Russian Caucasus and in Persia, it

would seem just and wise that the Armenian people resident in these three regions should be permitted to form a new community which, under protection and proper encouragement, might grow to be a strong, worthy and highly respected people.

Acknowledgments are due to Miss Eveline A. Thomson of Constantinople College for assistance in the preparation of this report.

S. T. D.

LAWS FOR PRIVATE SCHOOLS IN TURKEY.

The following is a series of rules relating to private schools, drawn up by the Turkish Government, shortly before the European War. Before that time the "Capitulations" (special privileges) left the foreign schools a very considerable amount of freedom in the pursuance of their several systems, which was the chief reason why foreign schools have had so large a measure of success.

These laws are repressive, crude and utterly unnecessary. They form another proof of the inability of the Turk for administrative work of any kind. The American institutions throughout the Empire were to be subjected to these as were other foreign schools. Even the independent American colleges, heretofore exceptionally free and unmolested, must, so said the authorities, adhere to this new order.

As yet, however, these regulations have been applied in a somewhat modified form to the American colleges. Thanks to the strong personalities of the two recent American ambassadors at the Porte, and also to the high confidence and respect in the eyes of the people, both Turks and Christians, which the heads of the colleges can command, the institutions have been allowed to carry on their work as before.

First Section.

GENERAL RULES.

Art. 1. Institutions opened and their expenses guaranteed by individuals or companies or Societies or Ottoman Communities recognized by the Government are considered private schools.

Lecture rooms opened and their expenses guaranteed for the purpose of teaching one or more sciences, languages and industries are also considered private schools.

Art. 2. It is forbidden to foreign communities and societies and companies to open schools directly or by means of others.

Art. 3. Schools to be opened by Ottoman communities recognized by the Government should be within the villages or quarters inhabited by the members of that community and also their

area and style of construction should not be in excess of their needs and they should be far enough distant so that their noise would not be heard from the places of worship of other communities and other schools.

Art. 4. In order that individual foreign subjects should be able to open schools there should be enough individuals of that nationality living in the place where they would open the school to show the necessity for such a school, and also provided that in the countries of such governments the custom of giving permission to Ottoman subjects to open schools shall prevail.

Art. 5. With the exception of kindergartens no boarding schools shall be opened in which males and females are mingled. In places where girls' schools of the same grade do not exist, coeducational boarding schools may be opened on condition of not receiving girls whose national customs are not adverse to such mingling.

Art. 6. In private schools where instruction is given in other than the official language (of the country), the teaching of the Turkish language, Ottoman history and geography is obligatory. The number of hours of teaching Turkish will be decided by the Minister of Public Instruction according to the needs of the students and the grade of the school.

Art. 7. Every school should have a director, and when he is one of the individuals who open the school, if he is possessed of the legal qualifications, he may assume the directorship.

Art. 8. In private schools opened by Ottoman individuals or communities or societies or companies no foreign director or directoress, and no male or female teacher who does not possess the license specified in Art. 29, can be appointed without the permission of the Minister of Public Instruction.

Art. 9. School buildings should possess the necessary solidity and sanitary conditions and they should be at least 100 arshines distant from places that can injure the character and health of the students.

Art. 10. Private schools are subject to the inspection and supervision of the highest civil authorities and inspectors of Public Instruction and Health Inspectors, and the schools of primary grade are also subject to the inspection and supervision of the officials designated in the Primary Education Law.

Section II.

REGULATIONS FOR OPENING SCHOOLS BY OTTOMAN INDIVIDUALS AND BY OTTOMAN COMMUNITIES, SOCIETIES AND COMPANIES RECOGNIZED BY THE GOVERNMENT.

Art. 11. The opening of schools by Ottoman individuals and by companies and societies recognized by the Government should be preceded by a notification.

Art. 12. These notifications are presented in the Vilayet to the Vali, and in the unattached districts to the Mutasurrif, and they must be signed or sealed by the individuals themselves or by their agent (Vekil) or by the heads of Communities or by those who have the authority to sign in the name of Companies and Societies.

Art. 13. In this notification should be stated:

1st. The place where the building shall be erected or the building which will be occupied by the school.

2nd. The name of the school, the kind of school, the grade of the school and the language in which instruction will be given.

3rd. Whether it is to be a girls' school or a boys' school.

4th. Whether a Boarding or a Day school.

5th. In what way the current expenditure shall be guaranteed.

6th. Who shall assume the directorship of the school.

To this notification the following documents shall be attached:

(1) The director of the school with the one who is going to open it, if they are Ottoman individuals, must present their nefus teskere or the identification booklet that would take its place, with certified copies, letters of recommendation of good character from the places where they live and from the last administration where they have been employed and a biographical statement.

(2) A certified copy of the Diploma of Certificate or Teacher's License of the Director, showing his school and the grade of learning to which he attained.

(3) A Doctor's Certificate showing that the building to be used for the school is suitable for the purpose and is

in accordance with hygienic laws and the number of students which it can contain.

(4) Architect's reports showing that the building has the necessary solidity.

(5) If the building is to be erected, its plan must be attached.

Art. 14. Upon this notification the Vali or the Mutasurrif gives a receipt. A copy of the notification is posted at the door of the Municipality or the Government House to which the place where the school is to be situated belongs. Taking into consideration the objections made by outsiders after investigation and verification by the Department of Public Instruction and the Public Prosecutor, and in case of need, after the opinion of the Council of Primary Education has been obtained, if this demand and application is not considered to conform with the conditions and regulations specified in this law, this decision together with the reasons for the refusal will be stated in writing to the presenter of the notification.

Art. 15. The posting of the notification must be within one month and the communicating of the refusal within two months reckoning from the date of the notification. If the communication is not made within these two months the school may be opened.

Art. 16. The presenter of the notification has the right to present objections to the refusal of the Vali or the Mutasurrif to the Ministry of Public Instruction for the investigation of the Chief Council of Public Instruction. The Chief Council of Public Instruction is obliged to give a decision on the objections presented within two months reckoning from the date when they were delivered to them, and its decision is final.

Art. 17. Within fifteen days after the opening of the School, the following must be presented to the Vali, or to the Mutasurrif of the Unattached Liva:

1. A certified copy of the Program of studies in detail and the Rules and Regulations of the School.
2. In schools where the instruction is in the official language (of the country) a certified list of books used with the name of the author and place of publication.

(Lectures dictated to the students must be included in this list.) In schools where the instruction is carried on in a language other than the official language, a similar list should be presented with a copy of each text-book.

Art. 18. In case the original School Building is altered or enlarged or in any way, the conditions stated in the first notification are changed the provisions stated above are in force.

In case the Director is changed, until a new appointment by the choice of the Founder of the School, one of the professors shall take up the duties of the Director. Also if any changes are made in the papers presented, the Vali or the Mutasurrif should immediately be informed.

Section III.

REGULATIONS ABOUT THE OPENING OF SCHOOLS BY INDIVIDUALS OF FOREIGN NATIONALITY.

Art. 19. A previous permit is necessary before any foreigner can open a school.

Art. 20. The petition containing the request for a permit is to be presented to the Minister of Public Instruction directly or through the local Government.

Art. 21. To this petition must be attached besides the documents demanded in Art. 13 a statement of the nationality of the petitioner with a certified copy of the document showing his citizenship.

Art. 22. The Minister of Public Instruction after making necessary investigations and verifications, if he finds suitable, can secure the Imperial Irade according to the regular procedure and give the permit requested. If he does not find it suitable he can refuse without being obliged to give any reasons for refusal.

Art. 23. Within 15 days after the opening of the School the documents and books stated in Art. 17 should be presented to the Ministry of Public Instruction.

Art. 24. In case any alteration or enlargement in the School Building is contemplated or any change in the conditions stated in the petition a new petition should be given in accordance with the conditions stated above, also any changes in the docu-

ments and the books as stated in the Art. above (No. 23) must be immediately communicated to the Minister of Public Instruction.

Section IV.

QUALIFICATIONS FOR FOUNDERS, DIRECTORS AND TEACHERS OF PRIVATE SCHOOLS.

Art. 25. It is necessary that those who are to open Private Schools should be of good character and that they should not have been condemned for any crime or any offense against morality.

Art. 26. It is necessary that Directors and Directoresses should be at least 25 years old and that professors and assistants of primary and secondary schools should be at least 19 years old and female teachers and their assistants at least 17 years old and that they should be all of high character and that they should not have been condemned for any crime or offense against morality.

Art. 27. Directors and Directoresses of Private Schools and male and female teachers and their assistant teachers of Preparatory Classes should have received a secondary education. Male and female teachers and their assistants of the College and University Classes must have received a University education. The grade of education which these teachers possess is to be verified by their diplomas or by a teacher's license given after examination.

For those who are to teach in schools opened by communities, teachers' licenses given by the religious heads of these communities and certified by the Department of Public Instruction shall be considered sufficient.

In the case of lessons such as the Koran, Bookkeeping, Penmanship, Gymnastics, Languages and Music and others which require specialization those who have received degrees or those who have shown themselves qualified by examination to teach these subjects may be appointed professors and assistants, male or female, without any regard for the grade of their education.

Art. 28. In Schools confined to studies of Commerce, Agriculture or Industry the male and female teachers and their assist-

ants, besides the conditions stated in the previous article, must have diplomas in the subjects they are to teach or they must prove their qualifications by examination.

Art. 29. In order that foreigners may be appointed as Directors or Directoresses or Professors or Assistants in Ottoman Private Schools they should possess the qualifications specified in this law and also they should have a permit from the Ministry of Public Instruction. Their fitness should be certified by diplomas or teachers' licenses certified by Ottoman Consulates.

In the case of those who are to teach in Private Schools of Primary Grade the opinion of the Council of Primary Education is also to be sought in connection with the giving of the permit.

These permits may be revoked.

Art. 30. Members of the Administration or teaching corps, or the employees of the Private Schools should be free from any epileptic or contagious disease, stuttering and deafness.

Section V.

CONDITIONS FOR REGISTRATION OF STUDENTS.

Examinations — Diplomas — Certificates.

Art. 31. The ages of children in Kindergartens must be between 3 and 7 and in children's classes 4 and 7, and for the first class in the Primary School between 6 and 15. Students may be received into the first class of the Secondary Schools up to 18 years old. For those who are to enter higher classes their age must be limited accordingly.

Art. 32. Students who apply to enter schools with a diploma or a certificate are accepted without examination according to the grade specified in their diploma or certificate. Those who do not present any diploma or certificate are accepted in the grade for which they qualify by examination.

These examinations are given by a Committee composed of at least 3 teachers under the presidency of the Director. The periods for examination of students of the classes, which are subject to the shortened term of military service, cannot be later than the first third of the school year. After this period is passed students can be received into these classes only by promotion in the regular order.

Art. 33. The Directors of Schools should present a list of examinations with the exact date and the hours and the conditions to the Department of Public Instruction, or, in places where there is no Department of Public Instruction, to the highest civil authority at least 15 days before the specified time.

The local Government and the Department of Public Instruction may send inspectors and examiners to these examinations. If these inspectors and examiners do not present themselves at the appointed hour and day the examining body of the school may proceed with the examination, only for private schools of University grade the examinations of the graduating class should be exclusively given by a Committee of Examiners either from an official school of the same grade or from the Ministry of Public Instruction.

Art. 34. Two lists containing the results of the examinations for graduation should be prepared and presented to the local Department of Public Instruction and in places where there are no authorities of Public Instruction to the highest civil authority, and from them they are sent to the Director of Public Instruction.

The Directorate of Public Instruction within 15 days from the date of reception is to certify one copy and send it to the Administration of the School keeping the other copy for its own files.

Art. 35. The Diplomas, Certificates and Degrees given by private schools should be certified by the Department of Public Instruction; otherwise they do not possess any official standing.

In Private Schools where instruction is carried on in a language other than the official language the diplomas and certificates given should be written either in two columns; in the first column the official language, in the second column the language of instruction, or they may be written on two pages, the first Turkish and the other the language of the school and the whole should be signed and sealed.

Section VI.

INSPECTION.

Art. 36. Inspection is made on these points: to determine whether the private schools have been opened in accordance

with this law and the conditions presented in the Notification or in the Permit; whether other lessons are taught which were not included in the Program presented according to Arts. 17 and 23; or whether books other than those specified in the list are being used; whether the teachers possess legal qualifications; whether sanitary laws are being observed; whether anything is being taught or imparted that would create misunderstandings and ill feeling between the different nationalities, or would be contrary to public morality or to usages or religion; whether anything is being done contrary to any of the conditions of this law; and whether they are working in conformity with their own Rules and Regulations.

Art. 37. Those who are authorized to inspect have the right to enter schools. In case of necessity, they can use force by means of police officers.

Art. 38. Those who conduct the inspection will take legal measures concerning the deficiencies and infringements which they discover. Legal measures will be taken only concerning conditions contrary to the law within the bounds of Art. 36 and after warning has been given and disregarded and the same infringements have been repeated.

Section VII.

PUNISHMENTS.

Art. 39. Schools opened contrary to the conditions specified in Sections II and III are to be closed administratively by the Department of Public Instruction and those who have opened them together with those who have assumed directorship are condemned to a fine of from L. T. 20 to L. T. 100 or imprisonment from 1 month to 6 months.

Art. 40. Schools opened contrary to the specifications in the Notification or the Permit will be closed by the Administration of Public Instruction and their founders together with those who have assumed the directorship will be condemned to a fine of from L. T. 5 to L. T. 50 or to imprisonment from 1 week to 3 months.

Art. 41. The teacher who has been imparting and teaching things contrary to public morality and usages, or to religions, or that would cause ill feeling and divisions between the different

nationalities of the country may be imprisoned for from one month to one year. The Director of the School who orders or has allowed this act is to be changed and the same punishment by imprisonment is to be inflicted upon him, and if he is the founder of the School, the School will also be closed.

Art. 42. The Director or the teacher or any of the employees of the School who encourage or force a student to take part in the instruction or the services of a religion or denomination, other than the religion or denomination to which he belongs, or prevents the student from attendance on school because of non-participation or if they do not prevent the participation of undiscerning students who attend by their own consent, will be imprisoned from one week to two months and dismissed from their service.

Art. 43. The Directors of Schools who give false certificates and diplomas and those who knowingly use such false diplomas and certificates shall be punished according to the 155th Article of the Penal Code.

Art. 44. Directors of Schools who accept students to classes or to the school above the grade of their instruction and age, contrary to Articles 31 and 32, those who advertise the grade and the kind of school contrary to the Notification and the Permit shall be punished by a fine of from L. T. 1 to L. T. 20.

The Directors who commit this act with the purpose of benefitting the student through the privileges of the military law will be punished by imprisonment from one week to three months in addition to a fine.

Art. 45. Those who dare to prevent inspectors from entering schools for the purpose of inspection or to prevent them from performing the duties of their office thoroughly shall be punished by a fine of from L. T. 10 to L. T. 100 or by imprisonment from 1 month to 2 years. In case of repetition the punishment will be doubled.

Art. 46. The teachers who do not possess the conditions qualifying them or have not taken permission according to Art. 29 will be prevented from performing their duties and will be fined from L. T. 5 to L. T. 25 or will be imprisoned from 24 hours to 1 month. The same punishment will be inflicted upon the Directors who have employed them.

Art. 47. In the case of Directors and teachers of schools who do not conform to, or who transgress the conditions of this law in ways other than the preceding articles, disciplinary punishments will be arranged and executed by the Department of Public Instruction, or, in places where there is no Department of Public Instruction, by the highest Local civil authority in the following ways:

1. Written Warning.
2. Written Reprimand.

Directors and teachers who persist in their acts and doings after the application of the above stated punishments or those who act in a way that brings two reprimands in one year will be dismissed from their service and punished with a fine of from L. T. 1 to L. T. 20 or imprisonment of from 24 hours to 3 months.

Section VIII.

VARIOUS ARTICLES.

Art. 48. Punishments financial and corporal are decided upon by the Justices of the Peace and other Courts of Justice. If only the minimum of fine is demanded by the Department and paid voluntarily the prosecution of the lawsuit will be withdrawn.

Art. 49. To the application of the disciplinary punishments specified in Art. 47 it is possible to make objection before the Administrative Councils within 15 days from the time of the announcement of them.

Art. 50. According to Articles 38 and 39 the closing of a school is decided by the Vali or the Mutasurrif of an Unattached Liva. This decision may be objected to within a week from the time of its announcement. The objections will be investigated by the Grand Council of Public Instruction. The execution of the decision to close to which objections have been raised is postponed, only the regulations and proceedings concerning the closing of schools on account of contagious diseases is subject to special law.

Art. 51. In case Administrative or Judicial decision is taken to close a school, or a decision is taken by the Administration of the school itself to close, it is obligatory that the boarding students should be boarded as usual until they are delivered

over to their guardians. In case of the closing of a school for contagious disease the treatment of the boarding students is subject to a special law.

Art. 52. In Private Schools a register should be kept showing the names of the students, their place and date of birth and place of residence, the nationality and denomination to which they belong, the date of last vaccination, the date of their registration in the school, the name, the title, the work and place of residence of their fathers or guardians; also another register should be prepared showing the names of the teachers, the officers of the school and its employees, with the date and place of their birth, their denomination and nationality, the kind of work they are doing at the school, and the place of graduation and the grade of education of the teachers.

Art. 53. The directors of Schools are obliged to furnish, as quickly as possible, the information and explanations concerning the Private Schools asked by the heads and officials of the the Civil Government, and the Department of Public Instruction; also to fill in the statistical blanks within 3 months of the closing of the school year.

Art. 54. If Public Exercises be held for the distribution of Prizes and on other public occasions the local authorities must be officially informed in writing 3 days beforehand; also a program in the official language as to how the exercises are to be conducted should be presented, as shown in Art. 35. Programs to be distributed on such occasions should be in Turkish and in the language of instruction of the school.

TEMPORARY ARTICLE.

Art. 55. It is obligatory that existing Private Schools which have not taken permits should, according as they are Ottoman or Foreign, present a Notification and apply for a permit in conformity with this law within two months from the date of its publication.

Those who have received previous permits should be considered as opened in accordance with this law, only foreigners must have their firmans registered at the Department of Public Instruction.

Art. 56. The Ministry of Public Instruction will prepare regula-

tions showing the method of application of this law; in this will be shown the conditions specified in Sections II, III, IV, V, which are not to be enforced in the case of the lecture rooms mentioned in Art. 1.

Art. 57. The 140th and 141st Articles of the Penal Code together with the conditions pertaining to the Private Schools in the existing Regulations and Decisions will be considered as abrogated.

Also the Articles 8, 19, 92, 93, 95, of the Law Concerning Primary Schools are not to be enforced in the case of Private Schools.

Art. 58. This law is in force from the date of its publication.

Art. 59. The Minister of Public Instruction is responsible for the application of this law.

HEALTH AND SANITARY CONDITIONS IN TURKEY.

The material presented in this summary was taken from reports prepared by the following persons:

Harpoot district: Rev. H. H. Riggs, Professor of Science, Euphrates College, Harpoot, Turkey.

Adana district: Rev. Thomas A. Christie, President St. Paul's Institute, Tarsus, Turkey.

Syria district: Professor William H. Hall, Syrian Protestant College, Beirut, Syria.

Mesopotamia district: Rev. A. N. Andrus, Missionary, American Board of Foreign Missions, Mardin, Turkey.

Konia district: Dr. Wilfred Post, American physician attending hospital at Konia, Turkey.

Smyrna district: Professor John K. Birge, International College, Smyrna, Turkey.

Jerusalem: Dr. E. W. G. Masterman, F. R. C. S., D. P. H., Medical Superintendent of Camberwell Infirmary and (before the war) Medical Superintendent of the English Mission Hospital, Jerusalem. (Report published in the Lancet, London, February 23, 1918.)

No effort was made to elaborate on the facts presented in these reports. The information was merely systematized. So far as possible the original expressions used in the separate reports were incorporated in the account which follows.

Sewage Disposal.

Syria. Sanitary conditions in Syria are said not to differ materially from those of other parts of the empire. Sewers are open. The streets are used as public water closets. There are swarms of flies. In cities of the type of Beirut a certain amount of street cleaning takes place. Elsewhere practically nothing is done. Screening of doors and windows, or even the covering of food in the shops to protect it from flies, is unknown. There have been sporadic attempts on the part of the government to have meat

kept behind wire screens. Houses in both cities and villages have their own privies. Generally these have a vault, some deep, some shallow; but often they are without any vault, the contents being thrown into the garden, or allowed to drain into the public way. The intense sunshine of Syria is her greatest purifier. Along the sea coast the very heavy downfall of rain on the steep slopes washes a great many impurities into the sea before they have a chance to become lodged in the soil.

Mesopotamia. The method of sewage disposal is described as too meagre to meet the requirements of decent sanitation. In villages there is an utter absence of sewage systems, while the cities and large towns are also conspicuous for their imperfect systems or the want of any system. In many places cesspools constitute the only method of sewage disposal. Taken as a whole the sewage produced in Mesopotamia is found on the surface. The sun is the only disinfectant. Much of the disease of this large part of the country is directly traceable to these conditions.

Harpoot district. In some cities a local and inefficient sewage system exists. Such sewers as are found merely carry the sewage outside of the city, and discharge it in the open air. The point of discharge of the sewer frequently is the center for the most prosperous market gardening, the sewage furnishing abundant fertilizer. In the matter of plumbing traps are almost unknown, so that the sewers generally have a draft upward towards the city and fill the houses and streets with a stench from the sewers and cesspools. In most villages there is no attempt whatever at sewage disposal. Each house at best has a shallow cesspool opening on the street where from time to time men shovel up the sewage and carry it to the fields. No attempt is made at covering or screening. The air of the streets is apt to reek with stench, and to be filled with flies which swarm about open cesspools. Most frequently it is reported there is not even an attempt to provide cesspools or any other kind of disposal. The streets and the hillsides serve as public water closets. It is said to be difficult to conceive of any conditions less favorable for health so far as sewage disposal and water supply are concerned than those found in the Harpoot district.

Konia district. Sewage is usually disposed of by the dry closet method and carried away in carts and thrown upon the open fields as fertilizer.

Smyrna district. In most of the quarters of Smyrna itself underground sewers are found. In the Turkish quarter, however, the dirty water from sinks and washing places runs through the middle of the street. In the smaller cities around Smyrna the streets are commonly built with a gutter in the middle through which sewage is running most or much of the time.

Garbage Disposal.

Syria. Garbage is emptied in the streets. Wagons go about and daily collect the waste which property owners have dumped into the highways. It is sold to gardeners who pile the refuse into corners of their gardens where it remains for months to rot. Later it is spread on the ground where green vegetables are raised for the city markets. These piles of fertilizers, which contain dirty rags and other sorts of filth, are breeding places for flies and other insects. Street dogs have long been the city scavengers and they have aided materially in the disposal of garbage. Lately the government has been disposing of these dogs without providing any adequate substitute for the service they have rendered.

Harpoot. Household garbage is here as elsewhere thrown into the streets where dogs and birds are the only scavengers. Cattle are slaughtered in the streets, the blood being permitted to drain away across the roadbed.

Water Supply.

Syria. The water supply in all parts of Syria is on the whole good. Usually it is a village fountain enclosed in masonry, and fairly well protected from drainage. Beirut and Damascus now have water in iron pipes from the mountains. Damascus, however, still has the open rivers from which the people continue to draw water to some extent. Aleppo has a small supply of piped water. Aleppo is, however, reputed to be chiefly supplied from deep wells. Jerusalem is dependent on cisterns of rain water. Often a village is supplied by water brought in a channel from a distant spring. This channel is generally closed with slabs of rough stone with the object of keeping the soil of the hillside from being washed into it, rather than as a hygienic precaution. These stone coverings are never tight enough to prevent the infiltration of surface drainage.

Mesopotamia. With the exception of Diarbekir not a single city or town in all Mesopotamia has a water system under government control. In many of the communities the water supply is too meagre to meet the requirements of decent sanitation.

Harpoot. The water supply of various locations varies greatly as to purity and abundance. In mountainous places, such as Harpoot, Arabkir, and Egin, etc. the water comes from springs, and is pure and good. In other places, such as Malatia, Palu, Diarbekir, and many of the Harpoot villages, the water supply coming from distant places in underground water sources not well protected is liable to serious contamination. In Malatia the water supply is abundant, but in almost every other place in this district the supply of water is limited, expensive, or inaccessible, so that the people do not ordinarily have water in sufficient quantity for sanitation. In the city of Harpoot the local supply is so limited that even for common laundry work the people are obliged to go outside the city sometimes a distance of a mile or more. The use of water for adequately flushing closets and drains is impossible.

Konia. The main line of improvement of unsanitary conditions is stated to lie in the supervision of the water supply. In the city of Konia typhoid fever is comparatively rare owing to the piping of the water from the mountains and its distribution from a covered reservoir throughout the city, but wherever the people drink from their own wells typhoid fever and dysentery are the natural consequences. In the city of Karaman, which lies on the railroad and should boast of a certain degree of intelligence, the people still drink irrigation water which runs from the fields through the streets. These fields it should be remembered are extensively fertilized by means of sewage collected by the dry closet method. The vicious circle of contamination is thus said to be daily completed. At Eregli the same is true, and in both places malaria and typhoid abound. A special sanitary commission to control the water supply of the province, and to eliminate the mosquito would do more for the health and comfort of the million or more inhabitants than dozens of hospitals.

Housing.

Mesopotamia. In most of the cities and towns there has been much overcrowding in the houses of the poor and middle classes.

This has been aggravated by the tendency on the part of the poor and oppressed villagers to drift into the towns and cities so that they may find work or beg for a precarious living.

Harpoot. In the larger cities houses are built with some regard to the possibilities of light and sanitation, but in the country villages, and in a large degree in cities also, the houses are low, damp, dark, and ill-ventilated. In the villages the houses are built in continuous rows, and even in solid blocks without any windows whatever, the chimney being the only means of ventilation. The walls and floor are usually of mud, and the ceiling of rough logs with brush over them and mud plastered over the brush to make the roof. With such construction it is hardly to be wondered at that vermin abound in all houses. When lack of care and cleanliness is superadded it is to be expected that diseases carried by vermin should be extremely devastating. The habit of the people even where windows exist is to plaster or otherwise seal them up during the winter, resulting in total absence of ventilation. Add to this the fact that the people are very much overcrowded in their houses, and usually live a sedentary life during the winter, and it will be understood why, in spite of their good habit of living out of doors in summer, tuberculosis in its various forms is very common.

The Prevalence of Disease.

Typhus fever. In 1915 this disease caused the death of from 200,000 to 300,000 people. Several hundred of the physicians sent by the Turkish government to cope with it became infected and died. In the Erzroom region where from 60,000 to 100,000 died, soap, water, and fuel could hardly be obtained anywhere during the epidemic.

Typhoid fever. Typhoid is prevalent through the country. It assumes epidemic proportions in the summer and fall months. Great carelessness prevails in caring for patients, who have been seen dying of typhoid in rooms directly overlooking a courtyard where tons of dried beef were prepared for shipment to Constantinople.

Asiatic cholera. This disease runs its course in terrible fashion in a given region, and then seems to leave it for several years. It seems to be as much dreaded as any disease. The people look upon it as a sort of hopeless terror. As a rule little effort is made

to quarantine cases. Quarantine where resorted to, generally consists of painting a streak of yellow paint on the door post of the afflicted homes. Kindly disposed neighbors of the sick, however, are said to absolutely disregard the sign. Orders to eat only cooked fruits and vegetables are not obeyed. The ignorance of the population with respect to the disease and the manner of its conveyance is indicated by the fact that when accused of indifference in disobeying orders concerning the cooking of fruits the reply is made that the fruits do not seem to be any different in the present year (of the epidemic) than in former years. The eye cannot detect disease, hence the ignorant public reasons there can be no disease. Fear of personal injury from offended persons often prevents city physicians from insisting on the observance of rules for protection against cholera.

Smallpox. This disease is especially prevalent in village communities. More than half of the population is said to show pock marks. The mortality from the disease does not seem to be high. It is, however, the cause of innumerable cases of blindness among children. In this respect it ranks second only to gonorrhoeal infection. Vaccination is practiced in larger towns and cities and in the army. Only in the army is it systematically carried out.

Malaria. Malaria is prevalent in all the low lands of the country. It is the cause indirectly of thousands of deaths annually. When infected the custom is to take a few doses of quinine, and so to partially control the disease which may run on for years, make its victim physically unfit, and so a prey to other diseases. It is so common that quinine sulphate is a household remedy known to everyone by the name of "sulphato." It is used more than any other drug in the country. The native physician gives the remedy by mouth or intermuscularly. The result is, however, rarely controlled by miscroscopic examination of the blood. Netting over beds is used by some people solely as a matter of convenience to obtain sleep. No efforts were discovered to destroy mosquito larvae, or to screen houses.

Tuberculosis. The disease is present everywhere. It is found in every city, town, and village of the country. The houses themselves have become infected, so that family after family occupying them acquire the disease. In spite of a great natural dread of the disease the people take almost no precautions against its spread.

The tubercular patient is found in the same room with other members of the family. His bed on the floor will be shared in common with others in the family. He will perhaps take the precaution to keep an open tin cup beside the bed into which he expectorates. Even in well advanced cases the patient will be found eating with the family from the common dish. A diagnosis of tuberculosis by a physician in the minds of the family sounds the death sentence of a patient. Owing to the limited knowledge of the people concerning germ infection the advice of physicians as to means for protection against the disease is apt to lead them to miss the most important point. The forms of tuberculosis which are not common in the United States are said to be exceedingly common in Turkey. This is true of tuberculosis of the bones and joints, of the spine, kidneys, bladder, and of tubercular glands and tubercular peritonitis. There are no sanatoria for tuberculosis in the interior of the country.

Syphilis. In some of the villages this disease is found among 80 to 90 per cent. of the population. Medical men have accounted for its wide prevalence largely by the manner of living of the village people. They are huddled together using common eating and drinking utensils. The disease is thus carried from one to another in the same manner as any infectious disease, and is referred to as the so-called "innocent" syphilis. In these districts the disease is not associated in the minds of the people with immorality. Syphilitic ulceration of the skin, the so-called chronic syphilide, is a commonly seen form. In the large cities, and especially in the coast cities the social evil is reported to be flagrant. Because of the relatively costly treatment for the disease it is generally allowed to run its course. Mercury fumigation is a form of native treatment considerably used. Unfortunately, however, it often results in mercurial poisoning, so that it is not at all rare to see cases of extensive necrosis of the jaw bone as a sequel. Hospitals in the interior are as a rule not equipped to do the Wasserman test. No scientific study of the situation seems thus far to have been made.

Gonorrhoea. This disease is found more in the large centers than in the interior. It is probably the cause of more unhappy homes than any other disease in Turkey. It is considered one of the greatest misfortunes in Turkey to have a wife that cannot bear a child. It is even held to be a legitimate ground for divorce.

Gonorrhœal pelvic infection, as is well known, is frequently the cause of the childless home. As a cause of blindness in infants the disease holds first place. Because of the ignorance and uncleanly methods of the midwives of the country little is done to protect against this source of blindness.

Infant mortality. Medical men conversant with the situation have found it hard to estimate, but it is thought to be over rather than under 50 per cent. Almost inconceivable conditions surround the birth and care of the infant. Very little preparation is made in the ordinary home for the new born child. Frequently it is regarded as merely an additional burden. Maternity cases rarely reach the hospital. The midwife usually attends. The practice of native midwives is described as absolutely brutal and oftentimes criminal. Medical men report cases of contracted pelvis in which the strength of several midwives served to break the pelvis with fatal result to both mother and child. The induction of criminal abortion is common, and results in untold misery from the consequent infection.

The present care of the child follows the lines laid down by earlier generations. The new born child is wrapped in swaddling clothes with a sort of finely pulverized earth in place of the napkin. It is nursed whenever it cries, and is given a "comforter" made of a piece of Turkish sweet wrapped in a rag. By the time the infant is one year of age it is given bread, and a little of almost anything to eat. Sometimes it may nurse until it is two years or older.

The infectious diseases of childhood, such as measles, scarlet fever, etc., cause the death of large numbers of children. As soon as the rash is faded the child is allowed to go out and play in the streets with the result that it frequently dies from complications, such as pneumonia, nephritis, etc.

Surgery. The needs of Turkey in the way of surgery are great. Cases are most frequently seen in their aggravated form. Patients come great distances to the American hospitals. So great is the demand, and so limited the capacity and staff of these hospitals that their work has become largely surgical in nature.

Eye, ear, nose, and throat troubles. The situation as to these is pitiful. Trachoma is widely prevalent. An incalculable amount of defective vision with resulting inefficiency is found. Among the most frequent operations which surgeons of the American hospitals

have been called upon to perform are those for entropion and trichiasis, — the end results of trachoma. The prevention of blindness by the control of trachoma, gonorrhœa, ophthalmia, and smallpox is looked upon as one of the greatest blessings which may be given to Turkey. The blind are objects of great pity. They are apt to be turned out as unproductive members of society. People consider themselves poor enough without taking care of the blind, the deaf, the crippled, the aged, and the insane. Cataract is common. The native eye surgeons still practice dislocation of the lens with needles with the ultimate loss of the eye as a consequence.

Deafness and mutism, the result of neglected ear diseases are frequent. Mastoid disease and diseases of the antrum, the accessory sinuses are common. Dental trouble is likewise almost universal. It is said to be a rare exception to find a well kept mouth among the middle class in Turkey. Pyorrhœa is the rule. Native dentists are very mediocre, while the village people allow their teeth to rot uncared for until because of pain they have them pulled.

Flies, filth and vermin. These seem to be found throughout the interior of Turkey. The roadside inns are notorious in this respect. Foreigners find it necessary to provide travelling beds in order to keep away from the vermin. It is a common sight to see the village traveler sitting by the roadside picking the lice from his underclothing. Fleas are taken for granted as a necessary evil. They are everywhere in evidence. Bed-bugs infest practically every home in the interior, and in such numbers as to make calling in the homes most disagreeable.

The general statement concerning disease in Turkey contained on the preceding pages may be supplemented by brief additions referring to definite localities.

Jerusalem. The diseases of Jerusalem are many, — variola, varicella, measles, enteric, typhus, scarlet fever, influenza, pertussis, and cerebro-spinal fever all occur in epidemic form and claim large numbers of victims. Until recent years it is said scarlet fever was distinctly uncommon. Such diseases as acute rheumatism, pneumonia, broncho-pneumonia, chronic rheumatic arthritis are all common. Tuberculosis both pulmonary, and in the glands, joints, and bones is at present (1918) very common all over Palestine. There seems to be some reason to believe that it was rare here formerly.

Appendicitis and gastric ulcer are uncommon. Carcinoma is thought to be much less common among the Syrians than among Europeans.

The greatest scourge of Jerusalem is malaria, which in the autumn months is almost universal. On examination of some 4,626 children actually attending school in Jerusalem 27.3 per cent. had malarial parasites in the blood, and of 7,771 persons of all classes and conditions 26.7 per cent. had the parasites. Among poor Jews the percentage was 40.5 per cent. Among Mohammedans 31.1 per cent. Among native Christians 16.4 per cent., and among Europeans 7.2 per cent. Medical men state that there is no reason whatever to doubt that with proper organization this pest could be reduced to very small dimensions.

Blackwater fever is not uncommon in other parts of Palestine. Several fatal cases have been known to originate in Jerusalem itself. Dengue fever occurs in rather frequent epidemics. Recurrent fever due to spirochaetae is found occasionally. There are many sufferers from tropical boil in Jerusalem. Most of them are said to come from Aleppo, and its neighborhood, and from Bagdad. A local variety of this disease is known as Jericho boil. It occurs in the Jordan valley.

Jerusalem is one of the four centers in the holy land where lepers congregate. The majority fortunately are segregated in the Moravian leper hospital. A considerable number, however, still live in a row of miserable cottages in the lowest part of Kedron valley. During the travelling season they come in from other parts of the land. Several cases of bilharzia have been found. It was not believed, however, that the infections had been received in Palestine. Hookworm disease, if present must be very rare, as frequent examination of stools has not revealed a single case. This fact is considered remarkable because of the wide prevalence of the disease in Egypt. In Palestine not 10 per cent. of the population have absolutely sound eyes.

Taking Syria as a whole, certain of the most serious diseases endemic in this part of Turkey are typhoid, smallpox, malaria, dengue fever, and tuberculosis. There are frequent epidemics of cholera and typhus. Bubonic plague is almost always to be found in some more or less restricted area.

Adana. Malaria is prevalent owing to the large extent of

uncultivated land on the plain and many marshes near the coast. There have been three epidemics of cholera within thirty years. In every instance the disease was brought by pilgrims returning from Mecca. The neglect of the most ordinary sanitary precautions in the towns and villages always aggravate the scourge.

Smyrna. Asiatic cholera is the principal disease troubling the inhabitants of this district. There is an outbreak almost every year on so extensive a scale as to necessitate a quarantine of the city. Since the war began typhus and typhoid have also been common. In some interior cities malaria is very common.

The Control of Disease.

The reports already referred to contain incidental statements and suggestions with regard to the control of disease. These have been brought together on the following pages.

Efforts seem to have been made for a good many years to arrest the introduction of disease into the country by pilgrims as well as the spread of disease by pilgrims on their return. As early as 1881 a German physician was engaged at the quarantine station of Khanekin on the Turko-Persian frontier with a view particularly to preventing the introduction of disease. Owing to the fact that all devout Mohammedans seek to bring their sick to be cured, or take them for burial in holy ground, a constant procession of pathological types of all kinds passes along the routes of pilgrimages. The Mohammedans are said to be very skillful in evading the law. Often entire caravans manage to cross the frontier at some unprotected place. Fragments of human skeletons are concealed about their personal baggage in a highly ingenious manner.

Since the construction of the Hedjaz railway Syria has had a new avenue to disease opened. There were always a good many pilgrims to and from Mecca by the old caravan route. The railway has, however, multiplied the number many times, and so greatly increased the well known dangers of infection coming from Mecca. Palestine is also a menace to Europe for thousands of pilgrims from Christian lands visit the various sacred places every year and live in the great public hospices. These two pilgrimage centers are a constant source of danger, and especially so because no adequate system of quarantine or disinfection has ever been organized.

Various writers have described the exaggerated and fanatical regulations which on various occasions have been enforced in Turkish quarantine ports. At some places it was the custom to incarcerate all travelers for a week, — sometimes even to subject them to fumigation in a closed chamber. Quite a number of writers claim that the evil aspects of Turkey, both with regard to sanitary conditions, and with respect to the characteristics of the people have been persistently exaggerated in occidental countries. Some writers go so far as to claim that great injustice has been done Turkey largely from political motives. It seems to be generally admitted, however, that on account of native indolence and general ignorance sanitary conditions within the Empire are in a very backward state.

Syria. Practically nothing has been done to combat the various infectious diseases which prevail in this district. There is needed a widespread and systematic campaign of popular education on the value of cleanliness and the simple methods through which disease may be prevented. This work should be backed up by proper laws relating to public hygiene and their systematic enforcement.

Mesopotamia. To relieve the great overcrowding in the cities and towns of this region the suggestion has been made that the villagers can only be gotten back to the soil if they are assured of security of life and of property, and of immunity from oppression.

Harpoot. Popular ignorance with regard to the most elementary principles of hygiene make the health conditions of this region worse even than external circumstances would seem to suggest. Superstition takes the place of medical science, and the absolute indifference in regard to the frightfully high mortality, especially among children, paralyzes any effort to improve conditions. It is not at all uncommon, for example, to see a young baby of a few months sucking or chewing a raw cucumber. The average rugged health of the people is interpreted by one writer as the result of a most pitiless application of the principle of the survival of the fittest through which all who are not naturally rugged die in infancy.

Adana. The missionary hospital at Adana is said to have done immense good in improving the health of the people. The same is said to be true of the work of the medical missionary in Mersine. The infant mortality among the Mohammedan population in par-

ticular is enormous. The summer heat on the great plains is extreme. Those who can afford it go to the mountains or to the vineyards near the towns.

Konia. It is reported that as a result of German thoroughness smallpox, typhoid fever, and cholera have been largely eliminated from the army. This reform it is suggested should be made compulsory for the civilian population. It is believed that reasonable methods and instruction, oral rather than written, is necessary to the introduction of compulsory vaccination, especially in view of what is described as " the present intellectual condition of the country. " The main line of improvement in this region is said to lie in the supervision of the water supply. Attention to stagnant water it is believed would " accomplish wonders." It is useless to appoint commissions and publish literature if the people are unable to read or understand the instructions given them. The establishment of medical schools, clinics, and hospitals is also looked upon as an important step.

Smyrna. During the time of cholera plague lime is sprinkled on the streets, and since the war began a systematic attempt has been made to have the people vaccinated against cholera.

TRANSPORTATION IN TURKEY.

E. P. Cheyney.

The regions that make up the Asiatic Empire of Turkey require a more extensive transport of commodities and of men than many more populous and more highly developed lands. Intercommunication among mountain valleys, the natural intercourse between inland districts and an extensive seaboard, the profitable transport of necessary goods across wide stretches of desert, and the production of far larger quantities of certain articles in some regions than can be consumed by the producers, induce a very considerable carriage of goods from one district to another. The periodic migration of tribes between highlands and lowlands and between one part of the desert and another, the efforts of rulers to attain military power and to preserve political unity, pilgrimages to the most sacred shrines of three great religions, have made a continual coming and going of people far beyond what is true of countries differently situated, even of those which are more populous and more wealthy.

Again, the lands now under the Sultan lie in a certain sense midway between the orient and the occident; and, much as intercontinental travel and traffic between Asia and Europe have been diverted to other and easier routes, it is nevertheless true that Mesopotamia, Syria and Asia Minor have for long periods served and may serve again as a great bridge between the east and the west. Finally, this country is more permeable by lines of transportation than many more heavily forested, more swampy or more universally rugged lands. Thus necessity demands and opportunity rewards in these regions a relatively large amount of interchange of men and of goods, and the question of means of transportation and communication must be considered one of the fundamental factors in the prosperity of the peoples of Turkey and a natural part of any discussion of future policy in that part of the world.

I. Caravans and Pack Trains.

A large part of the transportation of goods in this region has always been and will necessarily continue to be by carrying on the backs of camels, horses, mules and donkeys. Along the trails and pathways that penetrate the more inaccessible parts of the rugged districts of Syria, Anatolia and Armenia and across the desert it is the natural and often the only means of carriage. The people are habituated to it, many of the routes are of great antiquity, and they follow the lines of least resistance in the physical configuration of the country. On these trails, on routes along the borders of the desert, for comparatively short distances across the desert, and between cities where water and food supply can be obtained at reasonably frequent intervals, horses, mules and donkeys are principally used, although even along these routes the characteristically oriental beast of burden, the camel, is often seen. For long journeys across the deserts of Syria and Arabia camels alone can be relied on.

Some of these caravan routes are of great continuous length. Among the most important are:

From Bagdad southward to Basra.

From Bagdad northward and eastward through Khanikin into Persia.

From Bagdad along the left bank of the Tigris, through the foothills of the Persian mountains, by way of Kerkuk and Erbil to Mosul.

From Bagdad along the right bank of the Tigris northward to Mosul.

From Bagdad westward to the Euphrates, up the Euphrates for 500 or 600 miles, then across the desert to Aleppo.

From Hit on the Euphrates directly across the desert to Damascus.

From Deir and Rakkah on the Euphrates through Palmyra to Damascus.

Along both sides of the valley of the Jordan, and by several routes thence northward to Damascus.

From Aleppo westward to Antioch, and to the sea, at Latakia and Alexandretta.

From Aleppo northward to Marash, and so into Asia Minor.

From Mosul northward and westward, crossing the Tigris at Jezireh, through Nisibin to Mardin; thence in two principal branches, one northward to Diarbekr, the other westward through Urfa, crossing the Euphrates at Birejik.

Five great caravan routes lead to the sacred cities of Medina and Mecca. One of these routes extends southward from Damascus, another southwestward from Bagdad and the regions beyond the Euphrates and the Tigris, a third directly westward from the coasts of the Persian Gulf, the fourth northward from the parts of Arabia that border on the Arabian Sea, and a fifth eastward from Egypt; all converging on Medina and Mecca. Each of these routes is several hundred miles long, and along them stream annually thousands of pilgrims from all parts of Islam.

In Asia Minor there are a multitude of trails through the mountain passes, and a considerable number of well established caravan routes extending for long distances between the old cities of the plateau, and connecting these with ports on the sea coast to the north and with towns at the heads of valleys extending down to the plains of the south. Many of these routes are the decayed remains of ancient main wagon roads and will therefore be again mentioned in the next section.

The three great difficulties in the way of satisfactory caravan traffic are (1) the seizure of pack animals by the government and by local officials, (2) plundering by marauders, and (3) mud in wet seasons, due largely to the absence of bridges over water courses. Since the war, especially, have come numerous reports of the seizure of draft animals that must have seriously depleted their numbers, and the keen eagerness of the inhabitants for a new supply has been repeatedly noted by observers. These deficiencies and the frequent disorder might with some improvement of government and at no great expense all be overcome; and caravan traffic, in the many districts where it is the most convenient method of transportation, be made an extensive, helpful and permanent system.

For further information on this subject, see the maps; for Mesopotamia and Armenia occasional descriptions in Bell, *Amurath to Amurath;* for Syria, Bell, *Syria;* for Anatolia, Sykes, *The Caliph's Last Heritage;* Hogarth, *The Nearer East,* pp. 96 ff.; for Arabia and Mesopotamia, Oppenheim, *Vom Mittelmeer zum Persischen Golf;* for Arabia, Hogarth, *Penetration of Arabia.*

II. Roads for Wheeled Vehicles.

Many of the routes which have been described above as caravan trails were formerly, and certain parts of them are now actual roads, built to allow of use by wheeled vehicles, graded, and provided with bridges over water courses and ravines. Much of this country was at one time in the possession of the greatest of road-builders, the Romans; and the Turks themselves in earlier times had some reputation in the same direction. The remains of Roman roads in some places still exist, and some of their bridges are still in use; and the same is true of some Turkish roads built in the sixteenth and seventeenth centuries. Most of these roads however have long fallen into decay, and are now usable, as stated above, only for pack-trains. A body of legislation on the subject of roads was begun in 1856 and continued in 1860, 1869 and 1891, but it has done little more than keep some remains of earlier roads in indifferent repair.

The roads begun by the Turks in later times have seldom been finished, or if finished kept in repair. Ambitious governors of provinces have from time to time utilized considerable funds and exacted much local labor in building certain stretches of far-reaching road systems. But either the money or the enterprise necessary for their completion has run out, or the governor has died, or been replaced, and the work left incomplete. In a number of instances detached parts of a road have been built but left unconnected by bridges, and sections especially difficult of construction have been left for later completion. In others the road material has been collected but left lying in heaps unutilized. Neglect and corruption have more than balanced enterprise and interest.

Nevertheless there are some comparatively good roads and of considerable length. A main road practicable for horses and vehicles extends from Aleppo to Urfa, a distance counted as a four days driving journey, and from Urfa to Diarbekr, as much further. There is a well-built highway from Sivas through Malatia and Kharput to Diarbekr. Sivas is also connected by an almost continuous built road through Tokat and Amasia with the Black Sea coast at Samsun. Sinope and Trebizond are also connected with the interior by practicable roads. There are several other wagon roads in Asia Minor, some of which are said to have been

much improved since the war began and even made practicable for automobiles. The native Turkish carriage, the *Yailieh,* and heavy low wheeled carts drawn by oxen can make their way over almost incredibly rough roads.

In Syria there are well engineered and remarkably well kept up roads throughout the Lebanon province, and the tourist travel has led to the construction of a number of passable roads elsewhere, such as that from Beirut to Damascus, that from Jaffa to Jerusalem, that from Haifa to Nazareth and across the valley to the Jordan. There are also roads from Damascus northward to Homs, from Tripoli to Homs, from Alexandretta to Aleppo, and there is a comparatively good coast road through Tyre, Sidon, Beirut and Tripoli. There is an excellent post road across the Taurus mountains from Eregli to Tarsus, following the route through the Cilician Gates which has been used in all ages. Another road crosses this at Tarsus running to Adana and Alexandretta in one direction and to Mersine and Karaman in the other. The roads of western Asia Minor are more numerous, following in many cases the same routes as those extending back to prehistoric times.

The great caravan routes along the courses of the Tigris and Euphrates are in some cases practicable and occasionally used for wheeled vehicles. A considerable portion of the route above Rakka on the Euphrates has been recently transformed into a carriage road. As one approaches the south actual roads become more and more scarce, yielding entirely either to caravan or to water traffic. In Babylonia proper, that is to say, the great alluvial region extending for a hundred miles north and south and a hundred and fifty miles east and west, there is no road-making material, and paved roads are therefore almost impossible of construction.

Except in this region material for roads exists everywhere. Indeed the framework of a practicable and adequate road system already exists. The completion of roads already begun, the construction of bridges, not of a very difficult or expensive character, and the transformation of some of the caravan routes into roads over which goods could be hauled by wagon, and automobiles could be driven, for use if not for entire comfort, would open up great stretches of Asia Minor, Syria and even of Mesopotamia to easy and profitable intercommunication by this method of transportation.

For the roads of Asia Minor see Ramsay, *Historical Geography of Asia Minor,* an extremely detailed and valuable work, with maps,

mostly referring, however, to earlier periods. For contemporary descriptions see Fraser, *Short Cut to India,* maps and the works cited above; British Foreign office, *Consular Reports,* for the various consulates in Turkey; Young, *Corps de Droit Ottoman, Routes et Prestations,* Vol. IV, pp. 245-253.

III. Water Transportation.

Apart from coastwise traffic, which might readily be increased with better port facilities, and an insignificant amount of boat service on the small rivers of Northern Syria and the Black Sea littoral, which is also capable of some, though not very much extension, all water traffic in Turkey in Asia is upon the Tigris and Euphrates and their lower affluents. Both of these rivers flow for the upper part of their course through a region of lofty snow-covered mountains, and for the remainder through an almost rainless, mostly low-lying and extremely hot region. The amount of water in the two rivers is therefore largely dependent upon the floods that come down from the melting snows in the spring and early summer. As the season progresses the rivers gradually shrink until the emerging reefs make navigation increasingly difficult, in some places impossible. This condition is less true of the Tigris than of the Euphrates, since it receives from the Persian mountains to the eastward four considerable affluents of more regular flow. Other difficulties of navigation are the rapid current of the rivers in the northern or more rugged portion of Mesopotamia, and, in the southern, the escape of the waters from the bed of the rivers to flow over the surrounding country, thus leaving the main channel very shallow.

The Shat el Arab, the combined stream of the two rivers below their junction, is a deep tidal stream for practically its entire course, and is therefore constant in volume. There is also a network of creeks and old canals in this delta region navigable for small boats. Generally speaking it may be said that the river system of Mesopotamia is navigable both up and down stream from its mouth at the Persian Gulf to a point some 600 miles above the Gulf on the Tigris and 300 miles on the Euphrates. Above these points there is only navigation down stream on the Tigris, and scarcely navigation at all on the Euphrates, except for ferry-boats, short stretches where the river is more open, and somewhat longer stretches at the time of the year when the current is fullest.

The traditional means of transportation for down stream voyages on the upper waters of the rivers is by rafts made of inflated goat skins overlaid with a decking of light poles. From 100 to 600 or even 800 skins are used for such a raft. On the light decks bales of goods and sacks of grain are piled, and they are sometimes provided with deck houses, with curtains, for the protection of passengers from the sun and flies. Long oars are used to keep them in mid-stream. Such a raft takes some five days to float down from Diarbekr to Mosul, and as much longer to reach Bagdad. At the termination of the journey the poles are removed and sold, the skins are deflated, made into bundles, and carried up stream again on pack animals. Wicker boats calked with pitch are also used on the upper parts and sometimes even on the lower course of the rivers.

On the lower waters of the two rivers and on the Shat el Arab, however, sail-boats are the well recognized and long established native method of transport. They are of considerable size and number, and an appreciable amount of trade is carried on by their means in the product of the country and even in materials intended for through traffic. On the connecting creeks smaller boats, which are rowed or poled, collect and transport local products. Far the most important part, however, of the commerce on these waters is carried by two lines of river steamers, one belonging to an English company holding a charter from the Turkish government itself. Their upper and lower termini are at Bagdad and Basra. Bagdad lies at the head of the alluvial or delta region of Mesopotamia almost 600 miles from the sea and at a point where the Tigris and Euphrates approach one another to within a few miles.

About 500 miles south of Bagdad, on the Shat el Arab, about fifty miles from the Persian Gulf, lies Basra. This is the division point between sea-borne and river-borne commerce. From the sea up to this point several steamship lines of British and other nationalities ply more or less regularly, and occasional tramp steamships come. From Basra to Bagdad, and as much further up the Tigris as steamboats can go, is the sphere of operation of the "Euphrates Valley Steam Navigation Company," the British company referred to above, and of the Turkish government or "Hamidieh" line. The former enjoys a monoply of the traffic as

against all other foreigners. Its privileges are based on a grant made in 1834 by the Turkish to the British government of permission to navigate the Euphrates river with two steamers, primarily for purposes of exploration. Three brothers named Lynch, two of them English merchants, the third an officer in the Indian service, obtained from the British government the transfer of this grant, and in 1860 secured its confirmation by the Turkish government. A company was formed and two steamers brought out soon afterwards by the Suez Canal. In 1875 the company obtained permission from the Turkish government to bring out another steamer, to alternate in service with one or another of the former two; sometime afterward they obtained permission to tow lighters, and in 1907 the grant was so far extended as to permit of the constant use of three steamers. Each of these usually tows a single barge at its side, the most that is practicable, on account of the many windings of the river. Each steamer and its tow can in this way carry some 400 tons of cargo, besides passengers. The voyage between Bagdad and Basra usually takes some sixty hours down stream, one hundred hours up stream. Each vessel as a matter of fact makes a round trip every two weeks.

The Turkish government line, formerly known as the Oman company, later as the Hamidieh company, had at the outbreak of the war eight boats running on the river. Although several of them were small and old they carried, nevertheless, more than one-half of the total steamboat freight. The rates on the government line are about 10% lower than those on the Lynch or British line, but it does not make as good time, it is considered to be more subject to accident, and it is not therefore utilized for as high a grade of freight and passenger service. There is, of course, no limitation on the number of boats the Turkish government can place upon the river, if it wishes, since the monopoly of the British company applies only to foreigners. The two companies, however, up to the outbreak of the war were on good terms and did not exercise any sharp competition.

The traffic passing through Bagdad, most of which comes and goes by water, amounts to about $12,500,000 a year in value, two-thirds being imports, one-third exports. About nine-tenths of this is British or British Indian, a number of English firms closely connected with Manchester practically controlling the market.

Since Bagdad is a great transfer point between water and caravan routes a considerable part of this traffic, about one-third, is in transit to or from Persia, which it reaches through the province of Kermanshah.

Basra, the south terminus of the river steamers has a somewhat more extensive trade. It includes, in the first place, most of the trade destined to or arriving from Bagdad; secondly, an extensive trade in dates, the most characteristic product of the surrounding region; and thirdly, a considerable amount of grain, this also being grown for the most part along the rivers and creeks of the delta. The incoming and outgoing annual commerce of Basra varies in value between $18,000,000 and $28,000,000. In 1913 the exports consisted of —

2,161,339	packages dates
44,393	bales wool
1,358	bales carpets
36,521	bundles licorice
725,380	cwt. barley
63,740	cwt. paddy
75,930	cwt. seeds

In 1913 the wheat crop was almost an entire failure, but in 1912 the exports had been 373,259 cwt. In 1913 the total value of exports was about $10,000,000, imports $16,000,000.

The tonnage arriving at Basra from the sea in 1907 was 237,000 tons. Of this 88% was British, 7% German and 3% Russian. The British shipping was mainly the property of three north of England steamship companies which act in combination. There was one German and one Russian line, the last consisting of one vessel, making four voyages a year between Basra and Mediterranean and Black Sea ports.

The river at Basra is 600 yards wide, and the channel between that point and the Gulf is from thirty to sixty feet deep. Since Basra is but fifty miles up the river it would be for all practical purposes a sea-port except that ten miles off the mouth of the river is a mud bar which makes difficult the entrance of vessels drawing more than eighteen feet. This bar is considered to make necessary in the future, or at least highly desirable a port outside of the river on the Gulf itself for the use of vessels of considerable size coming by sea. The advantages of such a sea-port apply not only to the facilities it would give for river traffic but to its possible use

as a terminus for a railroad leading inland. The possibility that it might go into the hands of rivals and be used for such a purpose no doubt gave added strength to the interest of the English in the little principality of Koweit. After long holding claims there the English government took a protectorate over it in 1901, and now holds its sheikh under their control so far as the external relations of his state go. Koweit is the best port on the Persian Gulf. It lies eighty miles south of Basra. The next best port on the Gulf outside of the river is Fao, sixty miles south of Basra; it is nearer the mouth of the Shat el Arab by twenty miles, but has a poorer harbor and is in a less defensible and less salubrious location.

There are great, though by no means indefinite possibilities of development of Mesopotamian river traffic. There is no vast body of population lying within its radius, and the productions of the country are limited in amount and variety. The possibility of serving as a section of a long, principally overland trade route between the far east and Europe depends largely on the cost of such transportation compared with the all-water route by way of the Suez canal, and the latter will in all probability always be cheaper, since water transportation is cheaper than land transportation. Nevertheless, with the interior of the country made more accessible by controlling the water courses and more productive by irrigation, increase of population and co-operation with the Bagdad railway, river trade may grow considerably larger, continue to be profitable to the carrying companies, and become much more beneficial to the people of the country.

See especially Fraser, *Short Cut to India;* Sir William Willcocks, *Irrigation of Mesopotamia.*

IV. Railways.

The railways of Asiatic Turkey have been with one or two exceptions, initiated and built by foreigners and almost entirely by foreign capital. The Turks have shown neither the interest nor the energy to establish such enterprises, nor have they the capital. Foreign capitalists, on the other hand, have considered the rewards of economic exploitation sufficiently promising to lead to the investment of vast sums in railway building, while political objects have also, no doubt, been considered in some cases. Notwithstanding the foreign initiative the charters of these railroads had to be

obtained from the Turkish government, and that government has either laid down the conditions to which the railroads should conform or accepted those which were offered by the foreign companies which were to build them. The four factors concerned in the railroads have therefore been the Turkish government, the capitalists and governments of five European countries, the economic, and the engineering conditions of the regions in which the railroads have been built.

The railways of Turkey may be arranged in six groups:

(1) those extending inland from the north, west and south coast of Asia Minor,

(2) those extending inland for the most part from the coast of Syria,

(3) the Hedjaz railway through the interior of Syria and Arabia,

(4) the British railway northward from Egypt through Palestine,

(5) the Bagdad railway, and

(6) (if the terms of the recent treaty of Brest-Litovsk between Germany, Turkey and Russia are to be considered valid) the Trans-Caucasian railroads.

(1) The Railways of Western Asia Minor.

These were begun comparatively early, built for the most part by English capitalists, and until 1888 remained largely in English hands. They are as follows: —

(a) Mudania-Brusa, 26 miles, decreed by the Turkish government in 1871, begun in 1873, its building long suspended but resumed in 1891 and completed in 1892 by a French company, the Société des Batignolles of Paris. This is a small narrow gauge line running from a port on the Sea of Marmora to the ancient capital of the Turkish Empire, and is of no great importance.

(b) Smyrna-Kassaba, with its long extensions north to Panderma, on the Sea of Marmora, and east to Afium-Karahissar, the junction point with the Bagdad railway, altogether some 400 miles; charter granted in 1863 to an English company; the first section built by them and began running in 1866. This and various continuations taken over


BLACK SEA
CASPIAN SEA
MEDITERRANEAN SEA
Caucasus Mts.
Taurus Mts.
Adrianople
Constantinople
Sinope
Samsun
Trebozond
Batum
Kars
Baku
Angora
Mudanla
Eskisher
Kara Hisser
Manisa
Smyrna
Egirdir
Konia
Adana
Mersine
Rhodes
Crete
Cyprus
Erserum
Van
Tabris
Mosul
Nissibin
Alexandretta
Aleppo
Tripoli
Homs
Beyruit
Damascus
Hoifa
Dera
Jaffa
Jerusalem
Alexandria
Cairo
Nile R.
Suez Canal
Euphrates
Tigris
Bagdad
River
River
Persian Gulf



by the Turkish government, according to the conditions of the charter, in 1893, and handed over to a French company, which completed its extension to the Sea of Marmora and to Afium-Karahissar before the close of the year 1897. This company has also been granted concessions for various connecting lines between the principal coast cities of north-western Asia Minor, which have not yet been utilized.

(c) Smyrna-Aidin, with its branches, 370 miles, chartered 1856, the original line completed in 1866; built and owned by an English company. The natural extension of this line would be to Konia, there to make connection with the Bagdad railway, but continuation seems to have been denied it. It represents a large investment, is well run, and has been profitable to its shareholders.

(d) Mersina-Adana: 41 miles, chartered 1883, originally built by English capitalists, opened 1886; an Anglo-French group bought it in 1896; taken over by German interests in 1908; united with the Bagdad railway system and utilized extensively in the building of the adjacent parts of that railway.

See George Young, *Corps de Droit Ottoman.* Vol. IV, 1908, pp. 180-207; 237-242, giving all principal documents; H. Charles Woods, *The Bagdad Railway and its Tributaries,* Geographical Journal, July, 1917.

(2) The Syrian Railways.

There are four railways running up from the Syrian coast, all now connected with an inland line or succession of lines parallel with the coast, at a distance of 50 to 75 miles from it, and extending from Aleppo southward through Hama, Homs and Damascus to Mezerib. Since Aleppo is connected by rail with the Bagdad Railway this whole Syrian system is now united with Asia Minor and the north. Arranged geographically, from north to south, and without regard to their control, the Syrian railways are as follows:

(a) Tripoli-Homs, 65 miles, completed in 1908.

(b) Beirut-Damascus, 81 miles. This line, which is really a steam tramway, passes over the Lebanon Mountains, where it crosses a divide 5,000 feet high. It was begun in 1892 and completed in 1894. The charter was granted to a French company, the Ottoman-Beirut-Damascus Railway Company, a subsidiary of the company which owns the

Smyrna-Kassaba line. About the same time another concession was given to a Belgian company for a road southward from Damascus. These companies were combined and from Damascus an extension was begun in 1894 southward through the Hauran, a fertile grain growing region, and this has been carried 63 miles to Mezerib. A short steam railway of ten miles along the coast from Beirut to Junie is run in connection with this railroad.

(c) Haifa-Deraia, 60 miles. This road was granted a charter as early as 1880, but nothing was then done. A new concession was obtained for an English company in 1891, and some portions constructed; it was again suspended but finally completed by the Turkish government in 1904-5, put in the hands of a French company, and opened to passenger service in 1905. It is now considered by the Turkish government a part of their Hedjaz railway.

(d) Jaffa-Jerusalem, 54 miles, concession granted to a French company formed in Paris in 1889, line opened in 1892. The investment amounted to $2,800,000. The construction was by French engineers, the rails were manufactured in France and Belgium, and the locomotives in the United States. The actual administration however is by Turkish officials. From Lydda on this line a branch has been recently built to connect with the Haifa-Deraia line, thus joining Jaffa and Jerusalem with the main Syrian system. A further concession was granted in 1913 to carry this branch on to Rayak on the Beirut-Damascus line, but it has not been built.

(e) Aleppo-Deraia, 350 miles. This railroad system, referred to above as running parallel to the Syrian coast, is composed of a line from Aleppo through Hama and Homs to Rayak, 206 miles, completed in 1906 by a French company, the "Chemin de fer Damas, Hama et Prolongements" according to a concession obtained in 1893. At Rayak it joins the railroad from Beirut to Damascus and makes use also of its prolongation through the Hauran to Mezerib, where it joins the railroad from Haifa to Deraia. A concession has been granted to a French company to extend this line still further southward to a point west of the Jordan, where

it would be joined by an extension of the Jaffa-Jerusalem line, but this has not been built.

After Turkey entered the war several portions of the Syrian railways were dismantled and their rails, ties and rolling stock used by the Turkish government for other military roads. This was done, apparently, in the case of the road from Tripoli to Homs, that part of the Jaffa-Jerusalem railway which lay between Jaffa and Lydda, and the extension of the Beirut and Damascus railway between Damascus and Deraia. The material was used, it is supposed, to build the military road which the Turkish government carried from a station on the Jaffa-Jerusalem road, southward through Beersheba to Bir Auj, on the edge of the Sinai peninsula, a total distance of 160 miles. This road was used extensively during the Turkish-Suez campaign and in the resistance to the later advance of the British troops, but it has now been destroyed by the British army for the greater part of its length.

These railroads are for the most part, as will be observed, of quite recent construction. Their equipment is not extensive, all those south of the junction point of Rayak being of narrow gauge, three feet, five and a third inches. Much of their business is dependent on the tourist and pilgrim trade, and they are not a part of any great through or commercial route. They are nevertheless of considerable importance both for their present use and future possibilities. French capital, influence and engineering skill have been in almost exclusive control of this group of railroads. It is said that more than $50,000,000 of French capital is invested in them. With the two other regions of French railroad interest, northwestern Asia Minor and the prospective field in northern Asia Minor and Armenia, it serves to give France an intense interest in Turkish transportation problems. The Syrian railways are particularly well calculated, because of their short haul to and from the coast, to open up such resources as the country possesses. With their connections to the north and the south somewhat developed they may also serve as part of an all rail connection between Paris and other European capitals and Egypt, which, though probably of no value for freight traffic, may be of great attraction to passengers.

See G. Saint-Yves, *Les Chemins de fers français dans la Turquie d'Asie,* Questions Diplomatiques et commerciales, Vol. xxvii, pp. 518-532 (1914); Woods, Geographical Journal, July, 1917, p. 54; Young, *Corps de Droit Ottoman,* IV, pp. 207-237.

(3) The Hedjaz Railway.

Extending southward from Damascus in Syria through the vast length of the Hedjaz, the westernmost province of Arabia, parallel to the Red Sea, is a railway built by the Turkish government itself between 1901 and 1908, some 820 miles in length. It is laid out along the old pilgrim route from the north to Medina and Mecca, and is intended to serve for the transport of part of the 250,000 pilgrims that are said annually to seek the shrines of the prophet. On this ground appeals for funds were sent by Sultan Abdul Hamid to Moslems in all parts of the world, a special medal in nickle, silver or gold being given to each subscriber. It is believed that from twelve to fourteen million dollars annually were for some years sent to the Turkish government for this purpose, furnishing all the funds required for the construction of the road. The labor was provided largely by Turkish soldiers, working under the direction of Meissner Pasha, the German-Turkish chief engineer, and a corps of European assistants. The road has therefore no shareholders and no bondholders other than the Sultan. It was originally intended to reach Mecca, but so far has only been built to Medina, to which point it was opened in 1908. It was without doubt expected also to serve the strategic purpose of enabling the Turkish government to overawe the half independent tribes of Arabs of the regions through which it passes, and to fulfill the economic service of opening up, along at least the northern part of its course, a rich wheat raising belt. This last object is further secured by two short branch lines through the Hauran (a) Deraia to Bosra, 22 miles and (b) Amman to Sault, 25 miles.

Several sections of the southern portion of the Hedjaz railway are said to have been destroyed since the outbreak of the war and the refusal of the southern Arabian tribes longer to recognize the Sultan. This rebellion must at any rate have made the Hedjaz railway largely unavailable to the Turkish government for its military or political objects.

See Maunsell, *The Hedjaz Railway,* National Geographic Magazine, vol. xx, pp. 156-193 (1909) and, the same article, Geographical Journal, Dec., 1908; Young, Vol. IV, pp. 242-4.

(4) The Egypt-Palestine Railway.

The British are building a railroad northward from Egypt, where it is connected with the government lines at Port Said,

through Palestine, keeping near to the coast and following close upon their military advance in that region. This is being built in the most substantial manner, double tracked and paralleled with a conduit of fresh water through the desert portion of its course. It had reached to within ten miles of Gaza by June 1st, 1917, and has since apparently been linked with Jerusalem. During the war it has been used solely for military purposes, but its solidity and valuable route would seem to fit it for more permanent uses.

(5) The Bagdad Railway.

No one of the railroads so far described, unless perhaps the last, can be said to have any serious political significance. They represent investments of capital with only such interest on the part of the European governments concerned as would help to obtain the concession or to make the use of the capital of their citizens profitable. The districts reached by these railroads can be called "spheres of influence" only in a very slight and restricted sense, although it is of course conceivable that under a weak government, such as that of Turkey, the control of the railroads might eventually develop into some degree of special political influence.

The Bagdad Railway, however, partly because of the peculiar character of the region it passes through, partly because of the circumstances under which it has been built and controlled, is not only an economic but a political factor of the first order of importance. This can be shown by considering (a) the steps of its construction, (b) its finances, (c) the diplomatic circumstances surrounding its history.

(a) The Building of the Bagdad Railway.

1871-1888. In 1871 the Turkish government engaged a French construction company to build on its account a railway from Haidar-Pasha, which is practically the same as Scutari, the point on the Asiatic side of the Bosphorus immediately opposite Constantinople, to Ismid on the Sea of Marmora. This line, 56 miles in length, was completed in 1873, and carried on by the Ottoman government for the next seven years. It was then, in 1880, leased to an English company for twenty years with the agreement that it might be resumed at any time. The Turkish government at the same time offered a concession to this company to extend their line to Aleppo, and thence to Bagdad, by way of the left bank of the

Euphrates, with various accompanying privileges, but this offer was not made use of. Several syndicates, one Belgian, one Bavarian, one Anglo-Amercan and another British company at one time or another within the next few years sought the concession for at least a part of this extension.

1888-1892. In 1888 the Turkish government exercised the right of resumption which was provided for in the lease, and took back this railroad. It then transferred its administration to a syndicate partly British but mainly German, connected with the Deutsche Bank at Berlin. At the same time there was granted to the same syndicate a concession to extend this railroad some three hundred miles, through Ada Bazaar and Eskishehr, to Angora in the centre of Anatolia. To utilize these two grants the German group of capitalists in 1889 formed themselves into the "Anatolian Railway Company," the English element in the original syndicate dropping out. The extension to Angora was completed in 1892.

The date 1888 marks the beginning of German economic and political influence in Asiatic Turkey. From that period the German and to a less extent the French activity in Turkey became greater than the English. The date of the completion of this branch marks the beginning of a bolder policy of railroad extension, based largely upon the greater German influence in Turkey.

1893-1896. In 1893 the Anatolian railway obtained concessions from the Turkish government for two new branches:

(a) An extension of great importance from Angora to Kaisarieh. Although this line would have been only 230 miles long it contemplated an eventual extension through Sivas and Diarbekr to Mosul and thence down the Tigris to Bagdad. This concession was not as a matter of fact utilized nor this route followed, partly perhaps because of engineering difficulties and expense, due to the mountainous character of the country, but principally because of the opposition of Russia, who resented the carrying of railroads through Turkey so near her trans-Caucasian border. If this route had actually been followed in building the Bagdad railway much friction with England and France would have been avoided, since it would not have interfered with the extension of their railways in Asia Minor, Syria, or Mesopotamia, as the route later adopted did.

(b) An extension from Eskishehr, midway on the line from Haidar-Pasha to Angora, to Konia, 269 miles. Work was begun

immediately on this branch; it was completed as far as Afium Karahissar in 1895, and reached Konia in 1896. Since an extension to Afium Karahissar had been granted in 1893 to the French Smyrna-Kassaba line, the German line from the north and the French line from the west were approaching their junction at this point at the same time. For some years, however, neither their tracks nor time-tables were connected, and it was not till 1908 that their connection was complete.

1898-1904. A series of negotiations between the German financiers controlling the Anatolian Railway Company and the Turkish government took place between 1898 and 1903 which resulted in three successive grants, dated November, 1899, January, 1902, and March 5, 1903, and the formation in 1903 of the "Imperial Bagdad Ottoman Railway Company," to take over the franchises of the Anatolian Railway Company and to carry out the new grants which it had by that time received.

The convention of March, 1903, which summed up these agreements, gave the new company the right to extend the railroad from Konia all the way to Basra, a distance altogether of some fourteen hundred miles, by way of a number of ancient towns, the principal of which were Eregli, Adana, Nisibin, Mosul, Tekrit, Bagdad and Kerbela. A number of branches were provided for, making connections with most of the cities lying within fifty miles of the main line of the railroad, besides more extended branches northward to Diarbekr and Kharput and southward from Zubeir near Basra to the Persian Gulf. The company was authorized to build wharves, port structures and warehouses at Bagdad, Basra and on the Persian Gulf, and to open mines discovered along its route. Special provisions were made for the cutting of timber, the making of bricks and tiles, the collecting of fuel, and the transport of necessities for construction, including freedom of all supplies from import duties and permission to use steam and sail boats on the Shat el Arab, Tigris and Euphrates during the period of construction. The possessions of the company were to revert to the Turkish government at the end of ninety-nine years or at any earlier time at an agreed upon valuation. The company agreed to begin construction practically immediately, to carry it on in sections of 120 miles each, and to complete the whole work in eight years. Financial terms, tariffs, nationality of employees, good order and other conditions were carefully provided for.

The first section of this line, 120 miles, extending from Konia through Karaman and Eregli to a little village called Bulgurlu was completed and opened to traffic in October, 1904.

The documents connected with the Bagdad Railway are published in a parliamentary Blue Book on The Bagdad Railway, printed in 1911, and in George Young, *Corps de Droit Ottoman,* Vol. IV, pp. 117-180. The more important of them are given in convenient form as an appendix in David Fraser's *Short Cut to India.*

1908-1914. The construction of the next stage of the railway was postponed for some years, owing to engineering difficulties and the great expense of crossing the Taurus mountains and the Amanus range, both of which were included in the next 120 miles. In June, 1908, however, the Turkish government agreed to the combination of the next four sections in one operation, so that the cost of the less difficult portions could be averaged with that of the more expensive. This would carry the road to el Helif, not far from Mosul, a distance of more than 500 miles from the terminus of the first section. March 19, 1911, a further agreement was made providing for the immediate building of the whole remainder of the road to Bagdad. The easiest parts were built first. By April, 1912, the portion lying between the southern base of the Taurus mountains and the northern base of the Amanus range, crossing the rich Cilician plain, was complete. This section utilized a part of the Mersina-Adana road, which, as already stated, had come into the hands of the Bagdad Company in 1908. A route was chosen for this section well back from the sea, so that it should not be subject in case of war to attack from a hostile fleet. To reach the sea, in accordance with certain clauses in the concession of 1911, a branch road 37 miles long was built from Taprak Kale, a point on this section, to Alexandretta, where the railway company was given extensive privileges, including permission to construct and administer harbor facilities. This branch road was completed by November, 1913.

By this time considerable progress had also been made at each end of the long line of the projected railway. On the north the road had been carried up through the foot-hills of the Taurus to Karapunar, 5,000 ft. high and almost on the crest of the range. At the extreme south advantage had been taken of the privileges of the conventions of 1903 and 1911 to bring railway materials from Germany by sea to Basra and from thence by river steamer

to Bagdad, and the line had been constructed northward up the river from Bagdad to Samarra, a stretch of some 75 miles. This section was opened to traffic late in 1914. Still another stretch was in progress midway on the route, east of the Amanus mountains, from Nidji to Muslimiyeh, the junction for Aleppo, and thence to Jerablus, where the Euphrates was crossed, at that time by a wooden bridge, and so eastward.

Thus by the outbreak of the war a very considerable part of the Bagdad railway had been completed and was in operation. With the exception of the two short mountain sections, the line was continuous to a point somewhere between the Euphrates and Tigris. Some 300 miles still separated this terminus from the beginning of the Samarra-Bagdad stretch. The plan for an extension from Bagdad to Basra seemed to have fallen into oblivion.

1914-1918. Since the outbreak of the war information as to the progress of the railroad is scanty and uncertain. It has undoubtedly been carried further. The German-Turkish allies have been able to utilize the labor of the British and Indian prisoners captured during the first Mesopotamia campaign, and the military importance of the road has been such as to give every incentive to its extension. The two mountain stretches are known to have been completed, filling in the gaps that remained down to 1914. The actual track and rolling stock on these sections are of narrow gauge, but the width of the tunnels, cuttings and embankments are all suited to eventual replacement with standard gauge equipment.

Beyond the Euphrates the road has been carried much further east, certainly to Nisibin, probably beyond. From the southern end the Bagdad-Samarra section has been carried on up the Tigris to Tekrit. Thus trains can be run without a break, except those caused by the changes of gauge, from Constantinople to Nisibin, a distance of almost 1,100 miles; and an interval of less than 300 miles remains unconnected in the whole route from Constantinople to Bagdad.

It is probable that branches have been constructed from the main line to Marash, to Aintab, to Birejik and to Diarbekr and possibly to Kharput. It is stated that construction has also been resumed from the old terminus at Angor eastward toward Kaisarieh and Sivas.

The progress of construction of the Bagdad Railway has now gone so far that there seems no doubt whatever that it will be

carried to completion, whatever the future fate of the country through which it passes, unless that fate should be mere anarchy and barbarism. Whatever its financial prospects or political significance, its established position as a great transcontinental highway forbids the expectation that it should be lost to civilization or even left uncompleted. Nevertheless its political position is a crucial question, which must be taken into consideration in any estimate of the future of Turkey.

See Jastrow, *The War and the Bagdad Railway,* chap. 3; Woods, *The Bagdad Railway,* Geographical Journal, July 1917; Fraser, *Short Cut to India,* 1908; Dominian, *Railroads of Turkey,* Bulletin of the American Geographic Society, Dec. 1915; André Chéradame, *La Macedoine, Le Chemin de Fer de Bagdad,* 1903; Paul Rohrbach, *Die Bagdadbahn,* 1902; Jaeckh, *Deutschland im Orient nach dem Balkankrieg,* 1913.

(b) Diplomatic History of the Bagdad Railway.

Parallel with the physical construction of the Bagdad railway runs a thread of diplomatic negotiation which distinguishes it from an ordinary commercial enterprise and has made it an important factor in the international relations of the period 1888-1914. The main thread of these negotiations is as follows.

1856-1888. During this period British influence at Constantinople was paramount. A number of concessions were then obtained and much British capital invested in Turkey. Of the five railroads built in Turkey before 1888, the Smyrna-Aidin, Smyrna-Kassaba, and Mersina-Adana lines were all originally built by British capital and with British materials, and remained for a longer or shorter time under British management, while of the two Ottoman lines one was for a period of eight years under British administration. These railroad companies had no political objects. Their calculation as to success was based on existing trade, and their hope of extension lay in the economic development of the regions through which they passed and of those immediately adjacent to them. They were purely commercial in character.

A somewhat more ambitious, though a stillborn scheme, was the "Euphrates Valley Railway Company," organized in England in 1856 with the object of building a railway from Alexandretta or some other port on the Mediterranean coast to the Persian Gulf. This plan was based on the reports of the British Euphrates survey of 1835, and General Chesney, who had been in charge of that

expedition, was made consulting engineer of the company and sent to Constantinople as its representative. With the help of the British ambassador he obtained from the Turkish government in 1857 a general concession to construct a railway from Suedia, on the Syrian coast opposite the island of Cyprus, to Basra, on the Shat el Arab. The Turkish government guaranteed 6% interest on the capital necessary to construct the first section, that is to say, that part of the road which would extend to the Euphrates. Some other privileges were granted and certain semi-political advantages for Great Britain were anticipated, such as quicker transport of passengers, mails and troops to India, and a certain extension of British influence in the regions traversed. Many meetings were held for the sake of creating an interest in the plan and there was much writing on the subject in Great Britain. But neither private capitalists nor the British government gave effective support to the scheme, which would have required a capital of $50,000,000 and the adoption of a bold governmental policy. Although a commission in 1868 and a parliamentary committee in 1872 made reasonably favorable reports on the plan, nothing was actually done and the matter fell into almost complete oblivion.

It is possible that the acquisition of the island of Cyprus in 1878 was connected by Disraeli with the possible development of this project, and indeed the matter was brought up tentatively at the Congress of Berlin, but no further steps were taken by the government. In 1880, as already stated, when the Turkish government leased its Haidar-Pasha-Ismid line to an English company it offered the company a concession for a line to Bagdad by way of the Euphrates river, but this was not accepted. In 1882 an English group proposed a new scheme for building a road from Tripoli to Bagdad and Basra. They wanted the Turkish government to grant them also a strip of land about two miles wide along the line of the railway, which they proposed to colonize with Jewish emigrants from Russia. But neither the Turkish nor the British government favored this proposal. Apart from other complications it is evident that the Turkish government would prefer a line connecting their capital with Bagdad to one connecting the Syrian coast with Bagdad. As late as 1909 and 1910, the old project was brought anew into discussion in connection with a French scheme to extend the Tripoli-Homs railroad to Bagdad and with Willcock's plan for the irrigation of Mesopotamia.

In the meantime the influence of Great Britain with the Ottoman government gradually declined, and it is doubtful whether any railroad project could have been carried through which was not favored by Germany. At best the Euphrates Valley Railroad plans were accompanied by a minimum of political influence and had no close connection with any governmental or far reaching schemes. Nevertheless the possibility of such a route from the Mediterranean to the East remained a matter of occasional commercial and diplomatic consideration until it was definitely disowned by the English government in 1914.

See *The Bagdad Railway Negotiations,* Quarterly Review, October, 1917, pp. 487-528, with map, a particularly valuable and authoritative article; George Young, *Corps de Droit Ottoman,* Vol. IV, p. 155.

1888-1903. Apart from a certain traditional German interest in Western Asia, and occasional suggestions from German writers for expansion in that region, such as Moltke's recommendation in 1844 of a German advance in Palestine, Roscher's in 1848 of an extension of German interest in Asia Minor, and Sprenger's appeal in 1886 for the seizure of some parts of Asia Minor before the Russian control of that region became complete, the close connection of Germany with Turkish affairs begins about 1888 with the activities of the group of German financiers already referred to. This group, identified with the Deutsche Bank of Berlin, was originally introduced into Turkish affairs and for some time represented by Alfred Kaulla, Director of the Union Bank of Würtemberg at Stuttgart. Just at the time when British interest and influence in Turkey were declining German interest in that country was asserting itself. In 1888 the German emperor made a ceremonious visit to Constantinople. It was in the year 1888 that the first German railroad concession was obtained, as already stated, the German capitalists paying for the Haidar-Pasha-Ismid line $1,200,000, though they received at the same time a "kilometric guarantee" of the usual kind. In 1889 the Anatolian Railway Company, an almost purely German organization, although nominally Turkish, was founded. In the same year the German emperor made his first visit to Constantinople. The construction of the Ismid-Angora line was put into the hands of a Frankfort company, which hired German, French, and Italian workmen. From this time forward the Germans continually occupied a favored position in railroad enterprise in the Turkish Empire.

When in 1893 the request of the German interests represented in the Anatolian Railway Company for a concession to extend their lines to Konia was made, the British ambassador at Constantinople appealed for delay and consideration of the interests of the Smyrna-Aidin line, which would necessarily be adversely affected, at least in its plans for its natural extension eastward. The German government expressed through diplomatic channels its resentment at this effort to block the plans of its subjects, and the Turkish government granted the concession asked for by the company.

Through the immediately succeeding years German influence at Constantinople continued to grow. This was partly, at least, due to loans and the connivance of the Germans with the internal misrule of Turkey and with the Armenian outrages perpetrated with the encouragement of the government in 1896 and 1897. In 1898 the Emperor again visited Constantinople and the Holy Land, and in his speeches declared his special attachment to the Moslem peoples. There seems no doubt that by this time the German government had determined to utilize the Bagdad railway for its far reaching schemes of domination, based ultimately on military force. In December 1899 the Turkish government gave its concession to the reorganized Anatolian railway company for the new route to Bagdad. This concession was reduced to a definitive form by the successive grants of January, 1902, and March, 1903. This culminating concession, as already stated, gave to a company practically German the virtual control, or at least a predominating influence, in a great zone through Asiatic Turkey all the way from Constantinople through Asia Minor, Northern Syria and Mesopotamia to the Persian Gulf.

The grant of the Bagdad railway concession as gradually perfected in the agreements of 1899, 1902, and 1903, was clearly adverse to the interests and ambitions of Russia, France and England, and the governments of all these countries took steps to neutralize the disadvantages, or to procure for their subjects a share in the advantages of the proposed plan. The progress of these negotiations is obscure. Russia was placated by the abandonment of the German plans for an extension of their railroad through central Asia Minor beyond Angora although this route would probably have been preferred by Turkey. In April, 1900, the Turco-Russian Black Sea basin agreement was concluded, by

which all future railway extension in northern Asia Minor was conceded to Russia. Russia continued, however, for some years to interpose steady if not very vigorous opposition to the great railway.

A group of French bankers agreed in 1899 and again in 1903 to take part of the bonds to be issued, but the government was not able to secure what it considered an adequate guarantee for equal French participation in the control of the project, and therefore declined to allow the bonds to be sold on the Paris Bourse. French popular opinion criticized quite bitterly the bankers who had entered into the plan and the ministry which had failed to forestall the German grantees.

The deep interest of Great Britain in the concessions to the Bagdad Railway is indicated in a series of negotiations that were partially explained by the Prime Minister, Mr. Balfour, in Parliament in 1903. A full account of these negotiations is not yet available, but apparently the British government attempted to bring about what it considered a fair exchange. It would give (1) its agreement to an increase in the Turkish customs duties, which would be necessary in order to guarantee the road, (2) its promise to utilize the new railroad for carrying the mails to India, and (3) its influence with the Sultan of Koweit in securing trade advantages in the Persian Gulf, all these in exchange for thorough internationalization of the Bagdad Railway in capitalization, control and management, or at least for equal British representation in its capitalization and control. These negotiations were, however, unsuccessful. Neither Russia, France nor England participated in the scheme and the grants made by the Turkish government directly to the German interests concerned were retained in their hands.

See Parliamentary Debates, Vol. CXX, pp. 1247-8, 1371-4, and Vol. CXXI, p. 222; Guérard, *The Story of the Bagdad Railway,* Nineteenth Century, May and June, 1914; *The Bagdad Railway Negotiations,* Quarterly Review, October, 1917; Mehrmann, *Diplomatischer Krieg in vorder Asien,* 1916.

1903-1914. During this period the Turkish revolution of July, 1908, and the accession of the Young Turk party for a time placed Great Britain and France in a more favorable, Germany in a less favorable diplomatic position at Constantinople. After the completion of the first section of the railway in 1904 the German com-

pany, as formerly explained, was also confronted with the difficulties of further progress across the mountain ranges and insufficiency of capital for immediate use. Gradually however, the diplomatic influence of the German government was restored; in 1908 the revised scheme for building the remaining sections all at once was allowed, and by 1910 German influence in Turkey was apparently again predominant. The period between 1908 and 1914 was that in which the less difficult portions of the second and third sections of railway were being built.

The further concessions which were made by the Turkish government to the railway in March, 1911, were principally of a financial nature, but they included an important arrangement by which the sections of the railway south of Bagdad should be handed over to a new company, in which the Bagdad Railway Company would only hold an equal number of shares with any foreign companies. In the same year, by the "Potsdam Agreement" of August, 1911, between the Russian and the German governments, Russia at last undertook to withdraw all her opposition to the extension of the railway to Bagdad, and even to share with Germany in the building of others in that part of Persia subject to Russian influence. These would act as feeders to the Bagdad railway, since they would be connected with a proposed branch line from Sadijeh above Bagdad on the Tigris to Khanikin on the Persian frontier.

To meet the rising fortunes of the Germans in Turkish railroad building two new plans emanated from France and England in the years 1909 and 1910. The first of these was a concession which the French ambassador believed he had been promised by the Turkish government to continue the Tripoli-Homs railroad to Bagdad by way of the Euphrates; the second the English scheme to connect an independent railway from Bagdad to Basra with the irrigation schemes in lower Mesopotamia proposed by Sir William Willcocks. These two schemes were combined and every effort made to render them attractive to the Turkish government and not distasteful to Germany. The English and French promoters renounced any kilometric guarantee, only asking the Turkish government to assure the investors an income of 4½% on their capital. The Bagdad Railway Company was offered a desirable extension and connection with the new line. The project did not however commend itself to the Turkish government and never took more definite shape.

Nevertheless it was evident from 1908 onward that steps were being taken from various directions to reduce the amount of international friction over the Bagdad railway. In 1909, Arthur von Gwinner, President of the Deutsche Bank of Berlin, the most influential member of the Bagdad Railway Company, wrote an article in an English journal declaring that capitalists of all nations were at liberty to invest in the securities of the company and that it was to all intents and purposes an international undertaking. He suggested at about the same time to an English railroad official that a controlling interest might be granted to England in the section of the line to be built between Bagdad and the Persian Gulf. But the German government, it was believed, would not at this time, corroborate this offer. The Potsdam agreement of 1911 between Germany and Russia is another instance of *rapprochement* on this subject.

In the year 1911 an important series of negotiations between England and Turkey was begun which reached its culmination in 1914 just on the eve of the outbreak of war. No results seem to have been reached in 1911. Nor was anything accomplished in 1912, when two Turkish delegates, Djevid Bey and Reshed Bey, came to London and carried on negotiations on this and allied questions. Late in the year 1912, however, the British government made certain new proposals which brought a new Turkish representative, Hakki Pasha, to England early in 1913. In a short time an agreement was reached on a long list of outstanding differences between the two governments.

A number of these provisions required corresponding agreements with Germany. Negotiations concerning these were begun between England and Germany in May, 1913. Count Lichnowsky, the German ambassador in London, and von Kühlmann, councillor of legation, were both liberally inclined and looked at the questions involved in an enlightened way, as Lichnowsky's recently published Memoirs show. The discussion was therefore brought to a comparatively satisfactory conclusion in June, 1914. The main results of these diplomatic negotiations between Great Britain, Germany and Turkey were as follows: Great Britain agreed to withdraw all her opposition to the Bagdad Railway system and not to support the establishment of any competing railway, although it was agreed that a railway from Egypt should not be

considered to be in competition; Germany, on the other hand, acknowledged British supremacy in the Persian Gulf, on the Shat el Arab, and in all river transportation in Mesopotamia. The eventual termination of the Bagdad railway, it was declared, should be at Basra, not at the Gulf. There should always be two British directors on the board of directors of the Bagdad railway, and there should be no discrimination, in freight rates or otherwise, among the subjects of any governments on either the railways or waterways of Asiatic Turkey. The construction and control of the proposed harbor works at Bagdad and Basra should be put in the hands of a new company in which British interests were to have 40% participation.

By agreement with the Turkish government the whole control of navigation along the courses of the Euphrates and Tigris was put into English hands. The Lynch company was to be confirmed in its existing steam navigation privileges, and a new Turkish company in which British capitalists should have 50%, German capitalists 20% and the Turkish government 30%, a casting vote belonging to the representative of the British capitalists, was to be formed to take over the boats and privileges of the old government or Hamidieh Company.

Practical agreement between the governments of France and Turkey and France and Germany seems to have been reached on a similar group of questions at about the same time. The French terms were announced early in 1914 and on June 18, 1914, Sir Edward Grey announced in parliament that Great Britain's arrangements concerning Mesopotamia and other Turkish questions had been satisfactorily completed, both with Turkey and Germany, and that their final settlement only awaited the conclusion of certain negotiations between Turkey and Germany. It is a bitter decree of fate that the Great War should have broken out just when this one of its many incentives bade fair to be largely removed.

The history of these negotiations is in the main one of diplomatic success for Germany. As a matter of fact she obtained the Bagdad railway for German interests and through it predominance in Asiatic Turkey. This success seems to have sprung largely from the close co-ordination between the government and the financial and business interests of Germany. The highly organized, central-

ized and autocratic system which, in her political life, has given Germany such power, has been put at the service of her banking and industrial groups, which are indeed in themselves similarly organized. Consequently in this sphere Germany has achieved results which the diplomacy, the capital and the commerce of Great Britain and France have been powerless to attain.

How far this has been a desirable result is another question. German capitalists have not only been assisted by their government but have been used by it for its own ulterior and largely militaristic ends. It was only by giving up. much of their freedom of choice that the investors obtained the effective support of their government, and they were doubtless eventually controlled in their actions by the government. As a commercial speculation the Bagdad railway is a doubtful one. As an instrument of world domination it threatened, before the war at least, to do harm rather than good to the real interests of Germany, to her relations with other European nations, and to the well-being of the natives of the country. The Bagdad railway should and certainly will be completed, but in order that it may act as a civilizing not an injurious agency it must by some means be deprived of its political character. It has been a weapon in the hands of an aggressive, autocratic and military government which is a constant threat to the peace of its own people and of the world. The possibility of some solution in this sense is indicated by the approximate success of the negotiations which were in progress just before the onset of the war. The work will now have to be taken up anew when the war is over.

See André Géraud, *Story of the Bagdad Railway,* Nineteenth Century, May and June, 1914; *The Bagdad Railway Negotiations,* Quarterly Review, October, 1917; *Les Chemins de Fer dans la Turquie d'Asie,* Questions Diplomatiques et Coloniales, May 1st, 1914, pp. 518-532; Jastrow, *The War and the Bagdad Railway;* Lichnowsky, *My Mission to London,* Ed. by Gilbert Murray, 1918, pp. 15-20.

(c) Financial History of the Bagdad Railway.

It has been said above that Turkey did not possess the capital to build the railroads which were constructed upon her soil. This is true, and yet the expense of their construction and the deficit which may result are a burden upon her resources and her taxing power. In the case of several of the earlier railroads the Turkish

government guaranteed to the investors a certain percentage of profit on their capital. If the roads did not make this profit it must be paid by the Turkish government. Later the system of "kilometric guarantees" became almost universal. It has been granted to some of the French and English roads or to certain extensions of them, but has reached its highest development in the case of the Bagdad railway. According to this system an income of so much per kilometer is guaranteed to the company which receives the concession. Any amount lacking from this sum in the regular income of the company will be paid over to them by the government. This payment is in turn provided for by the allocation of certain taxes or made a regular charge on the national debt. Depending on this assured income the company proceeds to sell its bonds in the European money markets, thus drawing foreign capital into Turkish railroad construction.

In the case of the Bagdad railway, should all this capital be provided by German capitalists or should it be provided partly also by English, French or other interests? Since with the provision of the funds would naturally go a corresponding degree of control of the administration of the railway, this question was largely a political one and changed with the changes of diplomacy. The original stock of the Bagdad railway was $3,000,000, about one-half of which was paid up. In addition to this, before the outbreak of the war some $50,000,000 in bonds had been issued. Much trouble was found in floating these bonds and some of the issues have been sold therefore at a considerable discount.

In 1899 there was a plan to divide the capital of the railway between Germany and France, 60% to the former, 40% to the latter. A considerable part of the bond issue was taken privately at this time by French capitalists, notwithstanding the objection of the government to French investment unless the conditions it had sought from the German and the Turkish governments were granted. In 1902 a further attempt was made to allocate the costs of the railway in some definite proportion between Germany, Russia, England and France, but they were not successful. In 1909 the Bagdad Railway Company claimed to throw the privilege of subscription to its stocks and bonds open to everybody, but proportionate control was not offered. Finally, according to the agreement of 1913 between Germany and France, settling their

outlying differences in the East, French financiers took over a large but not publicly stated share of the then unsold bonds of the company.

It is to be noted that the concessions of practically all the foreign railroads built in Turkey, as well as that of the Bagdad railway, include provisions for their ultimate ownership by the Turkish government. These provisions are of great variety. In time they extend from a short period of ten or fifteen years to ninety-nine years. Some can be taken over by the government at any time it wishes, on conforming to certain stipulations. In several cases of short periods the time has already elapsed but in each such case it has been extended. Valuation varies from a set sum or the payment of an amount to be impartially estimated, to a surrender to the government at the end of the time without any payment on its part. The financial history of all these companies is especially difficult to trace, not only because of the complexity of the arrangements, but from the many changes that have been made and the various proposed arrangements that have not been actually carried out. In most cases, however, unduly burdensome financial conditions have been imposed upon the Turkish government. Some of the concessions have been obtained by the intermediation of an influential Turkish official or citizen who has secured expensive advantages for the company. In other cases financial have been subordinated to political considerations. Certainly, in the case of the Bagdad railway, its construction has been provided for largely at the expense of the already debt-burdened and over-taxed inhabitants of the Turkish empire. There should be a general revision of the financial relations between the railroads and the government.

See A. Géraud, *The Story of the Bagdad Railway,* The Nineteenth Century, May and June, 1914; A. von Gwinner, *The Bagdad Railway and the Question of British Cooperation,* The Nineteenth Century, 1909; David Fraser, *Short Cut to India;* Young, *Corps de Droit Ottoman,* IV, pp. 117-243 (documents); *The Bagdad Railway Negotiations,* Quarterly Review, 1917, pp. 487-538.

(6) The Trans-Caucasian Railways.

This system consists principally of the Poti-Tiflis railroad, 27 miles and the Tiflis-Baku railway 343 miles, which together make a continuous line from the Black Sea to the Caspian. This road runs for most of this long distance through a series of fertile and populous valleys and is paralleled by an oil-conduit, 540 miles

long, from Baku to Batum. A branch railroad from Batum joins this main line some 75 miles from the Black Sea and a series of extensions connects the capital, Tiflis, with Alexandropol, Kars and Erivan. Beyond these cities the railroad has been carried mainly for strategic purposes in two or three branches to points on the Persian border to the south and somewhat west of Kars to the old border of Turkey.

This whole system of railroads, which is only at its western extremity a part of the Turkish system, even according to the recent treaty, is connected with the railways of Russia proper by a line from Baku to Rostov-on-the-Don, some 818 miles long, passing between the Caucasian Mountains and the Caspian Sea. The main connections of the trans-Caucasian railroads are, however, at present with the sea rather than with the land, looking toward the Black Sea on the West and the Caspian on the East. The whole group however could without great difficulty be united with the railroads which are already planned, and possibly in process of construction, in Armenia and Asia Minor. They would thus be linked with the railways of Eastern Asia Minor, Syria and Mesopotamia, and thus with the whole system of Turkish railroads and other forms of transportation.

See Baedeker, *Russia,* 1912; H. B. Thompson, *The Oilfields of Russia,* 2 ed. 1908; J. F. Baddeley, *The Russian Conquest of the Caucasus,* 1908; S. Graham, *A Vagabond in the Caucasus,* 1911; Paul Rohrbach, *In Turan und Armenieen auf den Pfaden russisches Weltpolitik,* 1898.

Conclusion.

Mention has been made in more than one connection above of concessions already granted or plans made for additional branch railroads, such as the new French railroad in Syria, the continuation of the Bagdad railway to Basra, the proposed French railways in Asia Minor connecting Trebizond, Samsun and Heraclea with the interior, the extension of these railroads to Erivan, the railway from Homs to Bagdad and others. If these plans are taken into consideration, as well as the railroads, wagon roads, caravan trails, and river boat lines, it is evident that transportation in Asiatic Turkey is in a state of development far from embryonic. Unsatisfactory and inadequate as it now is, it might readily be brought to a degree of completeness that would fulfill the needs of

the present inhabitants of those regions, encourage their economic progress, play its part in long distance commerce, and conduce to the enrichment of the world. What is needed is unity of interest and control, co-ordination of plans, completion of what is already begun, and the introduction of a moderate amount of new capital. The task is relatively so practicable that it may well engage the attention of those who bring the world war to a close as one of the most hopeful contributions to a better future for mankind in this part of the world.

The whole system must, however, be treated as a unity. International jealousies and conflicts have prevented the normal extension and junction of the railroad lines and the most economical use of capital. The physical configuration of Turkey in Asia is such that groups of roads and railroad lines must not, if they are to be of the greatest usefulness, be restricted in each case to one or other of those vague "spheres of influence" of the respective European nations which have tended to take shape within the last half century.

Moreover, the interests of the native people of the country must be more fully considered. The willingness of the Turks to neglect, exploit or even destroy their subject peoples and the ulterior objects of European investors have combined to give the construction of railways an artificial character, making it conducive to political ambitions rather than to the interests of the native populations. Other forms of transportation and communication, on the other hand, have been neglected because they had no such political uses. A simple, well balanced system of roads, railroads, caravan traffic lines and water transportation, suited primarily to the needs of the native peoples, is quite within the bounds of political, financial and technical practicability, and should be the object of international effort at the close of the war.

THE POSSIBILITIES OF IRRIGATION AND WATER POWER IN ASIATIC TURKEY.

F. H. Newell.

1. Needs and Duties. The creation of thousands of small farms in Asiatic Turkey supporting in comfortable homes millions of people who are now either wanderers or are existing under most distressing physical and mental conditions is possible through the development of agriculture by irrigation.

Intimately connected with irrigation and forming an essential part of it are the subsidiary or related systems for drainage also other works for the development of water power. The latter may be utilized partly in irrigation and in drainage but more largely in the development of manufacturing industries which in turn are dependent upon agricultural products. These three operations — irrigation, drainage and water power production — are intimately entwined, one helping to make possible the others under fair government, and all leading to steadily increasing prosperity.

The country within which are located these great natural resources offers to the world on one hand, — if properly handled, — a hope and response for the future, on the other,— if neglected — the continuation of danger to the world's peace. The very fact of the existence of these great opportunities for wealth and increased population renders it necessary that prompt and effective action be taken to settle the threatening conditions. Throughout the historic ages, western Asia, viz. — Mesopotamia, Armenia and Syria, have been the bone of contention of world empire; at the present day they still possess attractions so great that until a well conceived, far reaching policy has been adopted, the country will continue to disturb the even course of world's history.

In this connection the following quotation is made from a recent statement of Sir William M. Ramsay:

"The Turkish problem is one that cannot be avoided in the near future. It is impossible to separate from the attention of the world a large population in a country that was once wealthy and productive and might be so again, a country which was more than

once the cradle of a young civilization and central point in the movement of history." (Quarterly Review, London, January, 1918, p. 50.)

"My conclusion is that Turkey must be taken into tutelage for the Western Powers and that everything will depend upon the personal character and the knowledge of the men into whose hands the task of regenerating Turkey will be put. Foremost among those who are fit to be entrusted with this duty are certain American missionaries in the country — not by any means all of them . . . . It is, however, not the purpose of this paper to do more than point out the urgent need for the application of knowledge and study and preparation for the revivification of western Asia. The knowledge is wanting, the facts have never been collected, and it is of first importance that they should be collected and tabulated now before the need of applying the knowledge presses upon us. . . . . No amount of knowledge, however, no collecting and tabulating of facts or statistics will be of any avail without the will and skill to use them in practice." (p. 68.)

2. The Problem. But what is this problem that can not be avoided, and in what way is there need for study and the application of knowledge and preparation for the revivification of western Asia? The answer lies in fact, as above stated, that nature has blessed the country with great resources in climate, soil, water and other minerals. These are not being utilized for the benefit of the people living in the country. If this vast area were sterile and unattractive, it is probable that the people as a whole would be freer and happier; but the combination of natural riches and human wretchedness is one which will not be let alone — it continually obtrudes itself and demands redress.

There is repeated temptation offered to the cupidity or ambition of the world in this, the ancient country which contained the "Garden of Eden." Here is a land from which come cotton, silk, raisins, dates, figs, and many other articles needed in world commerce — a country of hordes of people who may be exploited or held in industrial slavery for the enrichment of others, a land where mineral wealth, including petroleum, abounds. Today one of the greatest needs of the world is of more fuel oil, it must and will be taken under one excuse or another. Already various nations have entered upon the dangerous game of trying to define their respective "zones of influence." The world has been standing around the bedside of "the sick man of Europe" and manouver-

ing to get possession of the property. In the meantime the millions of inhabitants, remnants of ancient nations, have rapidly sunk into deeper misery — plundered and massacred in part by the Turkish ruling class, they look for help in vain, their cries, penetrating to the remote corners of the world and arousing little response in the latent altruism of far off states.

If these people are to be helped permanently it must be by making such plans that the natural resources will be developed and utilized primarily for the benefit of the present inhabitants, the cultivators of the soil, the laborers whose toil transforms these bounties of nature into forms demanded for human use. In other words, all improvements must be put on sound foundations. They must begin by obtaining an intelligent conception of the opportunities and by devising plans by which the irrigable lands, the petroleum and other minerals will be made available. They should not be locked up nor kept from use, but on the contrary, be employed to the largest possible extent and in such a way that all parts of the world may be benefitted and each receive its proper share of nature's bounty. This should be done in such a way as not to deprive the inhabitants of the country of the benefits which should properly come to them.

If the attempt is made to hold out of use or to keep for any particular class or group these great resources or to impose an unfair burden upon the farmers and laborers, there is little hope for the future; but if an adjustment can be reached, — as was done in the reclamation of arid lands of western United States,— one by which the first and greatest benefits come to the men and their families on the land, those who are most entitled to them, and next to the nation and finally to the world in general, then we may look for the dawn of prosperity and of world peace.

Either extreme is to be avoided, — on the one hand that of monopolizing the wealth of the area for the small ruling class, or, on the other extreme, of turning these over for exploitation to other nations or peoples to the detriment of the dwellers in the land. This is the problem which must be solved and which, as shown by experience, can be satisfactorily handled, in part at least, on the basis of similar undertakings successfully put through in the United States.

3. "Why Worry." Why should Americans be concerned in this remote country? One reason is that, as stated by Ramsay, American missionaries have already achieved substantial results; through their unselfish devotion they have won the confidence of all classes of people. Moreover, they are well informed concerning customs and tendencies. The Zionist movement, gaining strength from America and also from many sentiments deeply implanted in all sects, continually keeps public attention fixed on the land from which has come most of the great religions. On the other extreme, American investors have learned vaguely of the opportunities in petroleum, in copper and in other minerals, in agriculture and water-power; with the relatively complete exploration at home they are eager to try their hand in new fields.

Another reason which appeals to publicists and to engineers is the fact that the United States has already achieved great results in its own arid regions — a country which in area, climate, soil, in high mountains and deep valleys, is similar to Asiatic Turkey. In western arid America there have been encountered and have been overcome practically all of the natural difficulties found in Asia.

To put it in another way, the men who have already achieved success under similar difficulties, who have made it possible for thousands of families to find farms and happy homes in the waste places of arid America are willing and able to transfer their experience to this older country, — which in one sense is newer, — and to help straighten out the tangle which until satisfactorily adjusted leads to endless confusion in world affairs.

Excepting in differences which arise from purely artificial, governmental or social agencies there are no apparent combinations of conditions which have not already been studied and for which a solution has not already been worked out with greater or less success. Many valuable lessons have been learned; it is a duty which the people of the United States owe to the world to put at the disposal of this stricken country some of its superabundant energy and skill.

4. Prevision. Among the lessons which have been learned in the United States in connection with reclamation and use of its own arid lands are those of the necessity of looking ahead, of having a broad comprehensive scheme of development, one in which every important work will aid in the development of another

rather than interfere with it. For example, one of the largest items for future continued prosperity is that of the storage of floods, — of holding back in the mountain valleys the surplus waters which during spring and early summer are a menace or danger to the low lands, sweeping away bridges, roads, farms, homes and factories, and at other times of the year are needed for crop production or in power development.

Natural reservoir sites are comparatively rare and should be early sought for and protected from encroachment. In the United States, for example, in the eagerness to quickly develop the country and from lack of broad foresight, the first railroads entering the arid valleys were encouraged to build along the river banks and through some of the best reservoir sites. It would have been practicable, had some one in authority possessed large vision, to have required the location of these railroads in such way as not to interfere with the subsequent building of dams nor would the first cost have been appreciably greater. But when once built and operated, the expense of rebuilding a railroad, of readjusting interconnected industries to a new location with all the consequent complications, has proved to be so great as to prevent the largest use and best development of water resources.

In Asiatic Turkey, we should not repeat these or similar errors, nor in our desire to benefit the country cripple future expansion along similar lines.

5. Comparison with the United States. Carrying a little farther this comparison of the needs and opportunities of western arid Asia with western arid America, it may be noted that the entire area of Asiatic Turkey from the hot low marshes at the head of the Persian Gulf up through the Mesopotamian grass land or steppe to the high mountains of Armenia and Anatolia is no larger, and is comparable in many ways to the similar area beginning on the Gulf of Mexico at the mouth of the Rio Grande, or at the head of the Gulf of California in the marshes below Yuma on Colorado River, and extending up through the grass land or "bunch grass," "staked plains" of Texas and New Mexico, the plateaus of Arizona and the high peaks of the Rocky Mountain or Cascade Range.

In each of these widely separated countries, we find extremes of climate from the Arctic cold of the glacier bearing mountain tops

down to the temperate zone of the valleys and finally to the tropical heat of the gulf marshes or the depressions which go below ocean level. There are in each land the similar interior basins surrounded by mountains and from which water does not escape to the sea, where the streams, issuing boldly from mountain canyons, dwindle and are soon lost in what Americans call " sinks " or in saline lakes which occasionally become nearly or quite dry.

In both countries, irrigation development was undertaken and successfully practised by prehistoric people; on a smaller scale it is true in southwestern United States where the remains of small reservoirs, or rock tunnels and earthern canals show that mankind early appreciated the value and necessity of water storage and distribution. On a gigantic scale similar works were built in Mesopotamia by engineers whose names and nationality are unknown but which today are being restored and enlarged by the British.

6. Water Limits Development. In both countries the extent to which agriculture may be practiced, food provided, and population increased is limited by the quantity of water. There is more good cultivable land than can be supplied with water even after every practicable source has been conserved. Water and not land is the basis of value; the future development and use of the maximum area of land is dependent upon wise application of the principles of conservation. This is not alone through the storage of flood waters, but also by developing water power, and all other sources of power, for use in pumping water or for procuring it in other ways.

The greater part of the agricultural lands must necessarily be provided with water by gravity, that is to say the location of the lands to be cultivated is governed by the relative elevations of the land and of the water. While it is possible to overcome the difference in elevation by pumping, yet all things considered, it is impracticable to pump to more than a small proportion of the lands needing irrigation.

7. What is Known. In a large way we know a great deal about the country, its geography, history and resources. Scores of books have been written by travelers emphasizing mainly the unusual or picturesque side such as have been prepared by similar visitors to the western part of the United States, filled with details of adventures on the desert, in the mountain and with Indian tribes.

There are also available excellent general maps of Asia Minor and Palestine showing the location of the principal towns, the rivers and lakes, giving the altitude of the land and exhibiting in appropriate colors or symbols the amount of rainfall, the temperature and other climatic factors.

But, in detail and from the engineering standpoint we know little; before comprehensive works can be safely undertaken a large amount of detailed investigation must be begun. It seems to be a general rule that we know least in a detailed way about the countries longest inhabited. Again taking an example from the United States, it has recently appeared that in attempting water power development and similar enterprises, we have less accurate information concerning some of the oldest and longest settled states of the Union and in comparison more complete data for some of the states or localities in which settlement has hardly been begun. For example, in many ways we have less reliable data concerning Virginia than we have for Wyoming. This is a natural condition, in that where men have long lived and have obtained general impressions, they are less apt to initiate studies of scientific accuracy than they are for new remote regions.

Enough, however, is known to lead to the conclusion that there are throughout Asiatic Turkey almost innumerable localities where new irrigation works should be built or old ones improved or extended. These projects range in magnitude from those dependent upon a small spring gushing from the limestone, or from a well or artesian boring which may furnish water in the desert to a single garden or to a herd of cattle, up to the more complete canal systems or a crowning achievement, namely, one involving complete storage, diversion and use of waters of the great rivers, the Tigris and Euphrates. As previously indicated, there is no lack of examples of the practicability and value of the work which should be undertaken in every part of the country. It is more a matter of surprise that so little has been achieved in the way of extending the use of water.

If it should be urged in reply that practically everything has been done which is capable of achievement or that there are natural obstacles too great to be overcome in one locality or another it is only necessary, as above indicated, to cite the examples of recent works successfully built in the United States under similar unfavor-

able conditions. These have held back for use the torrential flood of large rivers or have brought the stored water through tunnels, crossing mountain ranges, to desert lands which in a decade have been converted into prosperous homes.

8. Investigations. If, as has been above stated, it is an accepted fact that while we have large general knowledge there is lacking precise data, what then is the next step to be taken? What should be done, what will it cost and how long will it take? From the general maps now available and from the knowledge obtainable from many publications, ancient and modern, it is possible to lay out a general scheme of procedure.

The first step is to make what may be termed a general hydrographic reconnoissance, one which will lay the foundations for a systematic study of rivers, lakes, springs and underground waters. Incidentally this will lead to the selection of localities where systematic measurements should be continued through seasons and years to give the fluctuations of important streams; the quantity of water which makes up the ordinary flow, the time and duration of floods, — especially those of extreme height — also the probability of the occurrence of droughts.

Joined with this hydrographic survey should be a detailed examination of localities which seem to offer opportunities for storage of water. There are usually to be found basins or valleys along the course of the rivers where they enter narrow gorges. The latter may be closed by dams converting the valley into a lake. Detailed surveys of these reservoir sites should be made as soon as possible to determine their relative value. At the same time similar surveys should be made of irrigable lands and of the location of canals which may be built to bring out water by gravity from the river channels.

In all of this preliminary study and examination as to the economic and effective ways of utilizing water, inspiration and encouragement may be had as before stated from the similar work carried on over equally extensive and difficult areas by the American engineers. It is a fortunate circumstance that this work has been so recently undertaken and brought to a successful issue, since it affords an illustration which can be applied immediately to the methods, successes and dangers of such an enterprise. The government of the United States, responding to the demand for addi-

tional lands for its people, instead of following old time precedents of encroachment upon the territory of its neighbors, has entered upon the policy of internal expansion, that of utilizing its waste places. It has taken up on a large scale the questions of reclamation and use of arid and semi-arid lands which during the previous century have been regarded as valueless.

It is hardly more than a generation since men of vision following the inspiration of John Wesley Powell, the explorer of the Grand Canon of the Colorado, began to urge upon Congress the necessity of taking action such as would guard the resources of the little known and despised arid west for the use of the people of the country and to prevent their falling into the hands of monopolistically inclined corporations. A little later, the energetic and efficient President of the Republic, Theodore Roosevelt, by the strength of his personality and official position, effectually overcame the opposition of inertia or indifference, with the result that on June 17, 1902, he signed the act which set aside the proceeds of the disposal of public lands for surveys, examinations, construction and maintenance of reclamation works.

In the interval from October 2, 1888, when the Powell irrigation survey was begun to the passage of the Reclamation Act in 1902, accumulations of facts were obtained concerning the rivers, reservoir sites, irrigable lands, and engineering features so that within a few years there were initiated and placed under construction the works in the more important localities in each of the seventeen states having arid or semi-arid lands. Among these works the best known are perhaps the Roosevelt reservoir; the Arrowrock dam, 350 feet high; the Gunnison Tunnel, 6 miles long; and others notable not only on their own account but because they illustrate what may be done elsewhere, particularly under the similar topographic and climatic conditions of western Asia.

These investigations and the construction work following them were undertaken in a country which at that time had relatively few transportation facilities and at points remote from centers of population and work shops. Thus the organization of similar surveys and the carrying on of work in Asiatic Turkey does not present at the outset natural obstacles radically differing from those already overcome. The chief difference lies in matters pertaining to governmental help or interference and protection from hostile attack, although even on this point in the United States there were oppor-

tunities for early apprehension on the part of nervously inclined individuals because the work was undertaken on lands recently occupied by hostile Indian tribes.

These facts are cited in this connection to emphasize the important point that with the general knowledge now available there is every reason why, upon the establishment of a stable government, investigations in western Asia should be pushed rapidly and economically. There should be no loss of time due to uncertainty as to the methods, as these have already been tried out on an equally extensive scale. Similar methods may be employed, on the basis of recent experience, modified to suit Asiatic conditions and with the reasonable expectation of success in achieving immediate results.

9. Hydro-Graphic Surveys. The first work to be undertaken is a broadly conducted hydrographic survey, one which will spy out all parts of the country and will result in the selection of important reservoir sites and the location of point of measurement of streams whose waters may be stored or diverted. It is true that the country has been mapped in a general way and that it is fairly well known from the standpoint of the traveler, but this general knowledge, while of value for guidance in laying out surveys, is not sufficiently detailed to be of use in discussing actual projects.

For this preliminary work, the best engineers are needed; men of long experience, whose judgment has been matured by years of contact with the problems of building and operating. The temptation is to employ relatively cheap men on this first looking over of the country but this is not economy because upon the judgment of the man who from the engineer's standpoint first sees the country depends largely the future investigations. It is easy to waste $10,000 on detailed examination of localities injudiciously selected by the reconnoissance man or to save many times this amount in subsequent structures. Thus while many assistants are to be employed later in the preparation of the maps and engineering data the preliminary studies and the outlining of the larger schemes, the weighing of alternatives and final selection from among these should be entrusted only to the best minds obtainable.

10. Engineering Studies. Following the surveys and examinations and selection of the projects, big or little, there come many questions of engineering, particularly with reference to the

character of works to be built, the materials from which these are to be constructed and the character of labor to be employed. Each locality has certain limiting conditions which to a large extent fix these matters.

The first and foremost is as to the quantity of water available, thus determining whether the works shall be large or small. If there is only enough water for a small acreage a few simple relatively cheap structures will suffice. In the case of the great rivers, however, there the controlling works must be of magnitude and strength to withstand the floods of centuries.

With an assured steady flow of water there is less necessity for providing storage reservoirs, but if as is characteristic of the arid region, the rains come in what are known as " cloud bursts " and great quantities flow down the previously dry channel for a few hours or days, then large retention works must be built.

The material for construction is preferably rock. In former times this was quarried, dressed to certain sizes and then carefully laid with close fitting water-tight joints. The ancients displayed wonderful patience and skill in procuring and moving these enormous masses without the use of power other than that of human muscles. Today with less labor available, the engineer has discovered that he can build better structures by crushing up the rocks into small fragments, mixing these with cement and pouring the mass into place, the operation of crushing, mixing and pouring continuing day and night through months or even years until the structure is completed.

Even where it is not possible to obtain rock of sufficient size to be mixed with cement, the case is not hopeless as it is usually possible to obtain soil of such character that it can be built into high dams such as that on the Belle Fourche Project in South Dakota, nearly a hundred feet high, surpassing in height those of ancient times.

The labor conditions are less easily determined in advance than those pertaining to the more purely engineering factors of water-supply and material. In some localities there is ample labor, in others war and devastation have driven out the workers and in still others there are no people living in the vicinity. It is probable that, as in the Unted States, much of the heavier work must be planned to be done by machinery. The more simple operations

such as those excavating the canals may be left to individual effort or to small contracts with native leaders. Consideration must be given in many instances to the feasibility of bringing into the country people who are accustomed to similar climatic conditions and who can be employed as laborers.

11. Gravity Systems. The principal works for reclamation of waste areas of Asiatic Turkey and for development of water power are those which depend upon gravity systems, namely, the diversion of water from the rivers on gently descending grades to the fields — or with high "head" to the power plants. These necessitate the construction of large works which are classified into (a) collecting or storage features; (b) diversion and carrying; (c) distribution; (d) drainage.

(a) The collecting or storing devices consist mainly of reservoirs made by dams holding back the water in broad valleys or depressions. There are known to be almost innumerable localities where apparently reservoirs may be built. Experience shows, however, that careful examination results in discarding most of these because of some natural defect either that of very deep or poor foundations for the dam, or of inadequate capacity of the reservoir basin, or of a scanty water supply, or other causes. Included in this category are wells or tunnels dug or driven to procure water from underground. The greatest expense and largest works are usually those built in connection with the obtaining or holding of the water.

(b) Next in order are the works for diverting water from the natural streams and for carrying it out to the point of use either for irrigation or water power. These consist usually of dams across the river, of head gates and canals, conveying the water at first in a course approximately parallel to the bank of the stream but on a less grade than that of the river and gradually swinging back from the natural stream. Here also large expenditures are necessary as much of this work is executed in narrow rocky canyons.

(c) The distribution features while relatively less expensive and less showy, are equally important. They consist of the smaller conduits, usually open trenches or ditches dug on gently descending grades taking the water to each and every irrigated tract. There may be in the aggregate several hundred miles of these on each

project. They require constant care and attention, also the maintenance of small bridges across them as well as water gates, measuring devices, and innumerable other accessories. Some irrigation systems are so fortunately located that it is not necessary to have storage or collecting features, nor expensive carrying canals — the main cost being merely that of distributing the water to the land but such instances of favorable topographic conditions are relatively rare.

(d) Every irrigation system must be provided with drains, especially if the water supply is ample as there is necessarily some water lost or wasted. To meet these conditions drains are provided.

While in a general way it is evident that there are many gravity systems which can be built to advantage, yet before definite conclusions can be reached as to the relative cost and value of these, thorough engineering studies such as those previously noted must be made.

12. Drainage Problems. Wherever irrigation is practiced there soon arises the need of drainage. As the available supply is increased and the farmer is assured of enough water, he almost invariably becomes careless and uses it lavishly until a point is reached where a considerable part of the irrigable lands are rendered marshy or alkaline by the accumulation of earthy salts resulting from the excessive use of water. Nature also has left many swamps in and around the desert valleys or on the deltas where the silt laden streams enter the ocean. The soil of these swamps if drained is highly productive.

Because of these conditions drainage must be planned in connection with every large irrigation system, also for the relief of lands naturally too wet for agricultural purposes. The largest drainage enterprise in Turkey is that of the vast marsh below Bagdad. The cleaning out of the irrigation canals and the regulation of the flow of the two great rivers will reduce the necessity for drainage but there are probably a million or more acres of land which must be provided with drainage works.

In the vicinity of each of the older cities or ruins of ancient settlements are usually to be found lands which once highly productive have been injured by neglect. They can, however, be again brought into use by building suitable drains to take away not only the excess water but to aid in washing out the earthy

salts or alkali. In some cases these lands are so low that gravity systems are impracticable. The water must be lifted by pumps through 10 or 20 feet or more vertically to heights where it may be utilized in irrigating other lands. Such conditions exist, for example, in the swampy area east and south of Damascus, also near Aleppo and other cities which have been built at points near where streams issue from the mountains.

13. Pumping. While by far the greater part of the area to be supplied with water for irrigation or to be relieved of an excess by drainage must be handled by gravity methods yet there are many localities where pumping can be effectively employed. This is particularly notable in places where the water supply is scanty and where it has correspondingly great value. In almost innumerable valleys throughout Asiatic Turkey there are known to exist underground waters at depths from 10 to 100 feet beneath the surface. There are other localities where there is reason to suppose that this can be found and where exploration by drilling or boring wells should be undertaken.

Much of the water thus reached by wells is heavily charged with mineral matter; in some instances it is too saline to be successfully used in the production of ordinary crops or for drinking purposes; but on the other hand there are widely distributed localities where the water brought to the surface has inestimable value in making possible small settlements or in rendering available large tracts of semi-arid grazing lands.

Water from wells already in existence is raised or pumped usually with crude devices and the maximum expenditure of strength and time. Labor saving machinery is almost unknown. There is a practically limitless opportunity for introduction of modern pumping machinery as, for example, the light, rapid-running steel windmill utilized by thousands on the dry plains of western America. As soon as a stable government has been established and the people assured of freedom from official plunder, there will be possible the introduction of many of these machines. Next in immediate importance comes the pumping engine, driven by steam or fuel oil. This is far more reliable than the windmill and is capable of handling larger volumes of water. The development of the petroleum of the country goes hand in hand with the introduction of engines of various kinds, needed in pumping water

for the fields and gardens, as well as for domestic uses and for animals. Similar machinery on a large scale is also needed for draining many of the valuable lowlands now in permanent or seasonal marshy condition.

The next step is that of connecting up the pumping machinery with sources of hydro-electrical power. This is the ideal condition, namely, one in which water flowing freely in the streams and descending to lower levels drives machinery which in turn through electric transmission operates pumps to lift water for irrigation. Here is possible the highest development of economy and efficiency, but here are required vast sums of money in building the permanent works. These sums are far greater than are available for the immediate development of the smaller agricultural areas by windmills and ordinary pumping engines. The success attained by the latter, however, ultimately will make possible the successful completion of the larger, more nearly ideal, schemes of utilizing the hydro-electric powers.

14. Power Possibilities. The power possibilities residing in the swiftly flowing rivers of western Asia are known to be great. In the aggregate millions of horse power are hourly going to waste in a land where industrial occupation is being continued by hand in the most laborious manner. In an article on " Engineering in the Near East ", Mr. E. O. Jacob says " I remember only too vividly visiting cities like Marash and Zeitoun with beautiful streams rushing right through the center of the town while in hundreds of huts alongside, men, women and children were slaving over hand and foot power spinning wheels and looms." (The Technograph, May, 1918, page 180.)

While these great powers exist and in the future will be largely utilized, yet at present there are many economic questions which must be solved. It is not enough that power exists, but there are many other factors to be considered in its employment. These may be summed up under the head of (a) markets, (b) quantity of water, (c) head of water, (d) cost of installation, (e) interest on the investment and maintenance charges.

(a) Markets demanding steady power — outside of a few cities have not yet been established although there are known to be many potential opportunities at centers of population, most of which, however, are far distant from the water power sites.

(b) In many of the streams but not all there is an ample flow of water and this can be steadied or regulated by storage reservoirs, but good reservoir sites are relatively rare and the dams are always expensive.

(c) The requisite head of water or its descent upon the water wheels may be had at natural falls or rapids or may be created by high dams or diversion canals, all of which also required considerable investment.

(d) The first cost of hydro-electric plants in proportion to the power available is usually so much greater than that of fuel operated engines that the question of cost becomes of prime importance. To illustrate the condition that existed, and possibly today remains, is that in Buffalo, New York, where, say, 5,000 horse power may be needed by a factory, it is cheaper to operate a steam plant and bring to it coal from hundreds of miles away than to obtain hydro-electric power by wire from Niagara Falls thirty miles distant. This appears almost incredible and yet when interest and depreciation on the water wheels, generators, transmission lines, tunnels and canals are considered, the smaller investment in the steam plant renders it less expensive in spite of the continual outlay for fuel.

The cost of hydro-electric development is also a matter of great uncertainty on account of unforeseen difficulties in foundations, the occurrence of unprecedented floods, high transmission cost and losses and many related conditions.

Summing up the power possibilities, it may be stated that these are great and will play a large part in the permanent development of the country. They should be immediately and carefully studied on the ground. In the near future the largest industrial development must come from the use of more readily obtainable power especially from fuel oils. This in turn means that first attention must be given to the discovery and development of this valuable resource.

15. Flood Protection. A large factor in the development of Asiatic Turkey, particularly of the delta region of the great rivers, the Euphrates and Tigris, lies in protection of the low fertile lands from annual or irregular floods. From prehistoric times these floods have been the source of great anxiety and of occasional ruin to thousands or even millions of people. The widespread destruc-

tion of the property and of lives has left its impression in the legends of the nations especially those living upon the nearly flat plain subject to inundation, the destruction being aggravated by the silting up of the larger canals and the breaking of their banks; as in the time of Noah when the entire area was covered as stated to a depth of 15 cubits or nearly 25 feet.

The ancient engineers attempted to combat the floods by building dykes, the prototype of modern effort. As stated by Sir William Willcocks, they wisely confined these to one bank of the river only, permitting the high water to overflow out and expend its forces on the other side. The present problem, one which should be studied carefully in the near future, is that of storing or diverting some of the excess flood and of building dykes on each side high enough and so located so as to restrain the diminished flood within parallel walls, protecting both sides of the river from inundation. This may be done at an expense which falls well within the value of lands reclaimed.

Similar works on a smaller scale must be developed for other streams, particularly those which flow out upon the edge of the desert valleys and where a similar course of procedure is needed, namely, that of storage near the headwaters accompanied by control at lower points. In this as in other problems there are plenty of examples of successful engineering afforded by the ancient works in the country and by the modern enterprises in western arid America.

16. Products. The crops which may be raised on the reclaimed land embrace practically everything produced by man. Tropical fruits are had on the low grounds, with cotton, various food stuffs, rice, wheat, barley, and other cereals, sugar cane, dates, olives, grapes, and figs, and on the higher ground mulberries for silk, potatoes and root crops, characteristic of European agriculture.

With the great variety of soils and climate the only limit imposed is, first, that of water supply and, second, that of markets and transportation. While throughout a considerable part of Asiatic Turkey there is an adequate rainfall for ordinary crops, yet in other large areas, of greater productivity, there are occasional or periodic droughts which render agriculture precarious without the insurance of an adequate water supply.

The question of future development, of increasing population,

and of prosperity is one which rests as before stated primarily on good government, one which will not rob the producer but on the contrary will stimulate activities. Next to this is the wise practice of conservation as it is now known, particularly wth reference to water supply and accompanied by a development of power resources, notably through the use of fuel oil to be supplemented,— as markets are created and industries stabilized,—by hydro-electric power. The latter since it involves large expenditures should be regarded as something for the future, to be taken into account now it is true, but to be developed after the immediate needs are filled by the cheaper and more easily procured power from windmills or from steam or gas engines.

17. Co-operation. Above all, there must be stimulated and brought into play a spirit of eager desire to succeed, a devotion to ideals, such as is displayed in the Jewish colonies and which has been found essential to success in every enterprise of this kind.

It is not sufficient to have favorable governmental conditions, which if too anxious or paternal may pauperize the people, nor is it enough that there be good natural resources, climate, soil and minerals, nor even the best of engineering experience and advice. All of these while fundamental are not sufficient. There must be a spirit of devotion and of service resulting in effective co-operation, such as may be had from a people driven out from their old homes and who have an intense longing to re-establish themselves and work out their own ideals.

18. Vision of the Future. "Without vision the people perish" but with vision — which is not visionary but founded upon successful experience — it is possible to foresee a great future for this country, not merely for its own people, but as factors in world developments, in prosperity, and in peace. This land has from all time been the key stone of the arch supporting eastern and western civilization; defects here have caused widespread weakness or ruin elsewhere. It has been the highway of nations in peace and war. It has been the center and source of inspiration of the great religions of the world. Its restoration and strengthening until it can support the pressure from outside is vital. There is no one country which perhaps in its far reaching influence is more necessary in world stability than this.

Moreover, there is no land which is appealing more strongly to the sentiments of the world from the lowest to the highest, from the merely commercial instincts of exploitation of petroleum, of copper, of agricultural lands, to the highest sentiments and religious exaltation. Here under wise administration must be worked out some of the greatest of engineering problems and of economic efficiency.

AGRICULTURE AND INDUSTRIES IN TURKEY.

George E. White.

Introduction.

The first command to the human race was, "Be fruitful and multiply and replenish the earth, and subdue it." In order to make a living men must subdue the earth, and the scale of living the world around varies in proportion to the control and use of the natural resources. All attempts to better human conditions rest upon the economic basis. People cannot be happy if they are hungry, cannot be sound in mind, body or estate if their surroundings are unsanitary, cannot be neighborly if they have nothing to share with their friends, cannot be good citizens if they have no resources from which to contribute to society and the state, cannot rightly serve God if they ignore his fundamental laws.

The people of Turkey are poor, ignorant and helpless. They know not how to subdue and enjoy the wide and rich domains which they occupy. Their pastoral and agricultural methods represent the primitive conditions prevailing twenty-five hundred years ago. Plowing is done as in the days of Elijah and Elisha, harvesting and threshing as in the days of Ruth and Boaz. The standard peasant feeling was expressed by one of their number who said, "Farming, — why that's easy. All you have to do is to scratch the ground, cast in some seed, and what God gives you, that you take as a crop." It has been estimated that an average farmer handles cash only to the amount of about $44 in the course of a year. Another calculation is that if an ordinary farmer receives 80 bushels of wheat and an equal value of other produce during a twelve-month, he is fairly satisfied. It is our ambition to offer friendly and constructive leadership from America in material things for the sake of both the material and the spiritual welfare of the people of Turkey. Our aim should be to meet them where they are, and share in the forward movement which many of them ardently long for.

In dealing with Turkey we deal with large areas. Omitting from our view Arabia and the tributary provinces that might have been included in 1914, Turkey is still larger than all her allies, Germany, Austria, Hungary and Bulgaria, put together. Turkey is not only larger than the home territory of any European Power, excepting Russia, but it is larger than any two of them combined. And its natural resources are proportionately as great or greater still. In accordance with the natural configuration and the economic organization, Turkey in Europe and Armenia are here included with Asia Minor. The Empire then falls naturally into three parts, Asia Minor, Syria and Mesopotamia. Asia Minor is larger than France or Germany; Syria is larger than Italy; Mesopotamia is larger than Austria or Hungary or the British Isles.

Asia Minor lies opposite our Atlantic coast between Richmond, Virginia, and Boston, Massachusetts, with its major axis running east and west. Mesopotamia and Syria reach from the latitude of Richmond, Virginia, down to northern Florida, or, more suggestively for the purpose of comparison, from San Francisco to San Diego and beyond. The climate then naturally varies from temperate to semi-tropical. In the north the uplands of Asia Minor are cold in winter with considerable snow, and are bracing all the year round. The southern plains are exceedingly hot, though not hostile to human life. All these lands are essentially a part of the Mediterranean basin, with a light rainfall ranging from twenty inches in the north to seven in the south, a high proportion of cloudless days and nights, stars that shine, and a sky over all of the wonderful Mediterranean blue. The country is one to stir to the depths the enthusiasm of a western American land hunter and pioneer.

It should be noted that most of these lands are within 200 miles of the sea and the ships. Only on the eastern border some parts of Armenia and Mesopotamia require a longer journey to reach salt water harbors and a share in sea-borne commerce. The short haul is the rule. In spite also of occasional storms the waters of the Black Sea, the Marmora, the Aegean, the Mediterranean and the Persian Gulf are gracious, and have been wooing and winning in their treatment of the traveler and the trader, ever since the days of Jason and the Argonauts, the Phœnician mariners, and Sinbad the Sailor.

The present writer asks those who may read this document to remember the conditions and limitations under which it is composed. He has not a professional training in agriculture or mechanical arts. Turkey is far away, and at the present time everything has been thrown into the red-hot crucible of war. The writer, however, has had some knowledge of farming from his youth up; he has enjoyed the opportunities of personal observation and experience in Turkey since 1890; and much helpful information has been furnished by his fellow missionaries and educators in Asia Minor, and by specialists in this country; the consular reports and the Levant Trade Review contain abundant facts and suggestions on agricultural subjects; and special thanks are due for courteous and helpful assistance rendered at the state agricultural colleges of Massachusetts, Kansas, Iowa, Minnesota, and at the Nebraska Experiment Station at North Platte.

AGRICULTURE IN ASIA MINOR.

Surface and Climate.

Asia Minor, or Anatolia as it is called locally, with European Turkey on the west and Armenia on the east is the heart of the Turkish Empire. It covers an area of 282,144 square miles. The configuration is that of a series of plains tossed higher or lower in the geologic eras, each surrounded by a chain of mountains. The salt water coast line is long in proportion to the area, about 1,500 miles, and is easy of access from the interior. The land surface presents three markedly distinct features: first, mountains with their peaks and ridges, spurs and slopes; second, broad plains flat or undulating, the home of the common people, the farming population; third, certain low lying plains, as at Smyrna and Adana, with deep cleft valleys threading their way everywhere, those lowlands, with their alluvial soil and abundant sun and water, being exceedingly fertile and productive. There are great advantages in such a variety of natural resources so near one to another. The mountains furnish woodland, pasture land, and streams for the purposes of irrigation and water power, and from which abundant electric power might easily be generated. It is also an advantage to dwellers in cities, on the plains or in the valleys, to have mountain resorts within easy reach for health purposes. The broad plains are admirably suited to the purposes of general farming,

and the lowlands respond without stint in producing semi-tropical crops and fruits. The rainfall is between 18 and 19 inches annually, and the winter is virtually a rainy season. The early rains in the fall prepare the ground for winter grains, and the later rains in the spring, if adequate or if helped out by watering the land once or twice, provide moisture for the ripening of early crops.

Products.

On the big broad uplands the prime staple produce is winter wheat with barley second in the farmer's estimation. The native strains of wheat in Turkey are first class; it is the home of "Turkey Red" wheat. One hardly realizes until he has lived in Turkey how truly bread is the "staff of life," and hardly realizes until he gets the psychology of the people in what high regard wheat bread is held as compared with any other kind of bread or cereal food, or other food for that matter. The Turks never say "grace before meat," but they sometimes say grace both before and after "bread." Barley is the almost universal food for stock, its grain taking the place of corn and oats, and its straw taking the place of hay.

Rye is cultivated to a considerable extent, also millet in some places, and oats are raised, but in comparatively small quantities. Corn is a second rate article in the common estimation, but a good deal of corn with small cobs and hard kernels is grown on the mountains similar in kind to the flint corn of New England. The introduction of potatoes is attributed to missionaries; they are easily raised and people like them, but have not become habituated to their extensive use. Tobacco and opium are money crops, easily and commonly produced. The tobacco of Smyrna, Bafra and Samsoun is famous in the American and European market, and American representatives are heavy purchasers at these and other points. Fields gay with poppies are a common sight in the spring, and there is an active trade in opium, almost entirely for export. White rice at Tosia and elsewhere, and red rice at Niksar are cultivated in quantity, and rice is one of the most important articles of commerce and of food. Licorice, gum tragacanth and valonia grow without cultivation and are important articles in the export trade of the country.

In the wild vegetation,— and there is a lot of it,— the predominating grasses must be similar to the buffalo grasses of our

western plains. They are green for about two months in the spring of the year, but stock will leave almost any hay or forage offered to them if they can pasture on the wild grasses even by pawing away the snow to reach them. Where buffalo grass grows wild, better paying tame grasses and other crops will respond to cultivation. Two other characteristics of the vegetation deserve especial notice. One is the abundance of plants of rather thorny or spiny character with a small expansion of leaf surface and adapted to the conditions of a dry climate. The other exceedingly interesting fact is the prevalence of legumes of various sorts which inoculate the soil with their bacteria and invite the cultivation of legumes for agricultural purposes including alfalfa. White calico beans are raised in quantity, so also horse beans. There are peas of several varieties including chick peas, inviting the use of cow peas and soy beans in crop rotation and as soil builders. Lima beans thrive amazingly. Lentils are abundantly grown and are as savory to a hungry man as they were to famished Esau. Peanut growing could undoubtedly be introduced. Lime stone rock abounds, and this with the inoculation of the soil by various legumes makes the raising of alfalfa a simple operation, as I know by repeated experiences. A little alfalfa is raised already, and Turkey might easily share with America in the abundant production of this most useful plant for forage purposes, and as a soil renovator. It is interesting to observe that the scientific name of the alfalfas, "medicago" is derived from Media, whence it was introduced with the name of its home into Greece and the western world. Media was on the eastern border of Asia Minor.

Ordinary garden vegetables may easily be produced in abundance: tomatoes, squashes, onions, beets of different kinds, carrots, turnips, cabbages, egg plant, okra, water melons, musk melons, cucumbers, greens like artichokes, spinach and lettuce; and the savory herbs. A friend must confess with regret, however, that farmers generally pay little attention to vegetables or truck gardening, except in the suburbs of the large cities, and raise very meagre supplies for their own tables.

Fruits are represented by apples of different kinds, cherries, apricots, peaches, pears, plums, quinces, and especially grapes. The grape in Turkey is regarded as the king of fruits, and is cultivated in many different kinds. The export of seeded raisins and seedless

sultanas, of wine and of grape syrup furnishes an important part of the commerce of the country. In the hot lowlands and valleys oranges, lemons, pomegranates, figs and olives are abundantly produced. The export business in figs, raisins, olives and olive oil is largely responsible for the growth of Smyrna, the chief commercial metropolis of the country. The following suggestive, but not exhaustive, table of exports to the United States from Smyrna may be inserted here. Cereals do not appear because there is no occasion to ship cereals to America, and it should be remembered that the trade of Smyrna with different European countries is many fold larger than its trade with America.

Article	1913 Value	1914 Value
Tobacco,	$2,387,814	$1,379,729
Opium,	846,464	1,364,916
Figs,	824,367	711,737
Licorice root,	337,897	458,174
Raisins,	94,843	78,909
Olive Oil,	39,007	148,000
Nuts		
Almonds,	447	1,140
Gallnuts,	3,203	2,703
Pignola,	8,666	1,860
Pistache,	9,600	6,066
Walnuts,	15,137	17,546

Fruit and Forest Trees.

English walnuts grow without difficulty in all the more favored areas, as does the almond. Beech and chestnut trees are abundant in the forests, but the nuts are not of high quality for table purposes, and are not used to any great extent. The filbert was first known to the Romans as *Nux Pontica* because introduced from Pontus, and whole ship loads of these fine nuts are sent from the Black Sea coast every year to the markets of Europe, Kerasoun being the center of the trade. Kerasoun is a reminder that this is the native habitat of the cherry. The Roman general Lucullus, after a victorious campaign in Asia Minor, carried home the first cherry shoots or trees, known in the western world, whence the name, Kerasoun — kerass — cerise — cherry. Wild strawberries on the mountains, and blackberries in the hedge rows are to be had for the picking. Finer varieties of course are easily capable of cultivation. Raspberries, currants, and gooseberries, do well in the American gardens, and the extension of berry culture is only a question of the desire to undertake it.

In common Turkish parlance the words *mountain* and *forest* are almost synonymous, which shows that from time immemorial the mountains have been thought of as clothed with trees. There are vast forests in many parts of the country remaining in spite of the fact that the trees have been cut away with ruthless rapidity. The encyclopedias reckon some 30,000 square miles of forests in Asiatic Turkey. The coasts of the Black Sea above Ineboli and Sinope are covered with heavy timber, and large supplies are shipped for building and lumber industries. I have ridden hours, almost days at a time, in this region through unbroken woods. West of Mersine quantities of lumber are shipped to Cyprus and elsewhere in general trade. The Dersim and Arghuni Maden districts and many other parts of the country have their thick forests still. The prevailing trees are beech, pine and oak of different varieties. Among the Taurus Mountains cedars of Lebanon are found, while elms of various species, and locusts are among the forest trees. Willows and poplars grow easily along the water courses on the plains, and the plane tree has held the first place for purposes of ornamentation and shade ever since the days of the Greek philosophers. It is fairly pitiful to see how the woods are receding up the mountain sides, and disappearing from the hill tops where they were a familiar sight in the youth of men who are now elderly. Whether precipitation of moisture is affected by the denuding of trees or not, the retention of moisture in the ground is seriously affected, with consequent damage to the vegetation. Great upland areas are covered with scrub trees and brush where the woods have been cut away, but even these are often ruined by browsing goats, and quantities of roots are taken out for fuel, completing the destruction of the forest. It is not necessary to go to Switzerland, however, to prove what may be done by the process of reforestation. In the Lebanon fine groves of young pine trees and orchards of mulberries and fruit trees show what the people and the mountains will do when they have half a chance.

Live Stock and Dairying.

The International Encyclopedia gives the following numbers for the domestic animals of Asiatic Turkey:

Cattle,	3,000,000
Horses,	800,000
Sheep,	45,000,000
Goats,	9,000,000
Donkeys,	2,500,000

Among the animals of the country, horses must be mentioned first. The native breed produces small, stocky, hardy animals, and the best specimens are always regarded as Arabs. Stallions are used on the roads and are the most important means of transportation in a country most of which has not yet been penetrated by the iron horse. The mares are kept for work about the homes, on the farms and for breeding purposes.

The cattle are of scrub stock and prevailingly brown or yellow in color. Oxen are used almost entirely for the cultivation of the land and for drawing the two-wheeled carts that carry farm produce to market. The cows yield milk rich in quality though small in quantity. No fresh milk is kept in the homes. As soon as it is drawn it is boiled and treated with *yoghourt* by which it is immediately artificially soured. This produces the Turkish buttermilk known by a variety of names, but common through all those Eastern lands. It is palatable, wholesome and refreshing, and where there is danger of disease germs in the milk, and conditions are such that it is difficult to keep milk sweet, it is an excellent custom to manufacture and use *yoghourt*. Butter is made by churning the cream from *yoghourt*. Cheese of different kinds is made in abundance, and is habitually found in the home of every farmer every day. It is ready and nourishing food whenever needed. For preservation it is often packed in tightly sewn skins.

There are many water buffaloes in the country, heavy, unwieldy, black animals, with sinking, stubborn heads, and thick, flat, receding horns. They are very strong and very useful for plowing and heavy draught work. The milk of buffalo cows is rich, and supplies good cream and cream products.

The Turkish peasants love sheep and goats. They are a pastoral people by origin, and have never wholly shaken off the semi-nomadic habits which accompany the life of shepherds and goatherds. Many of the sheep are of the fat-tailed variety, and supply a large part of the fat used in cooking. The annual clip of wool is a very important article of trade, besides supplying the needs of the peasant household. The Angora goats yield the famous mohair, and the export of Angora goats has been jealously prevented in order to maintain a monopoly of this valuable article.

Turkey has more donkeys in proportion than almost any other country. The people like animals that are small, easily kept and

hardy, and their needs are satisfied with the small power furnished by such animals.

The camel must be included in this list, for large herds of animals are bred, and it is not uncommon for American children to count 500 of these stately beasts stalking along with their loads on a single day's journey on any of the highways. The advantage of camels is that after the initial expense of rearing or purchasing the animals, transportation is furnished at a merely nominal cost as they pick almost their entire living from such pasturage as they find along the roads, though the rate of their movement is only about twelve miles per day.

Along with other live stock the great flocks of chickens, geese, ducks and turkeys that are raised in the village barnyards must not be forgotten. Samsoun is a great market for tobacco, but the turnover of business in eggs shipped to Trieste, Marseilles and Hamburg in a year sometimes exceeds the value of the business in tobacco.

Agricultural Methods.

The principal fuel for a large part of the population of the country is manure. This is gathered up, mixed with straw, patted into cakes, and dried, to be burned both for heating and for cooking. To this extent the land is deprived of its fertilizer and yields diminished returns to feed the hungry. Many of the farmers realize the value of manure to the soil and apply some in their fields. Many, however, are too idle or too careless to take the trouble to do this even when the supply of fire wood within reach relieves them from the temptation of burning their fertilizer for fuel. Great quantities of manure are left unused, while the land goes unfed. And no artificial or commercial fertilizers are employed.

The agricultural methods employed by the average villagers are about as crude as possible. Plowing is done with a wooden stick, with or without a shoe of iron on the point. There is no pretense of turning a furrow; the plow merely breaks a crack in the surface, and does not throw up plant nutriment from the subsoil or stir the ground for the roots to grow in. Weeds and grasses are not covered. Usually a field is left fallow every second or third year that it may gather strength to produce another crop.

Once I saw an American steel plow at work in Turkey. It was drawn by four horses, and one man drove the leading team, a second drove the other team, and a third man held the handles as the twelve inch plow wabbled through the stony soil. It was a great advance on the old method even so, but I never saw it a second time. Harvesting is done with a sickle or occasionally a scythe or cradle. I have sometimes even seen the grain pulled up by hand. Usually the men reap and the women bind. But in spite of such primitive methods the country presents a beautiful appearance about the first of September each year, all dotted over as it is with small grain stacks. Then a threshing floor is prepared by the selection of a level spot which is enclosed by a brush fence, and hardened with water. The grain is thrown down on this earth floor and beaten out with a sledge the bottom of which is stuck full of flint stones and which is drawn round and round by oxen or sometimes by horses. The sledge pulverizes the straw, and then the whole is thrown up with a notched wooden shovel against the wind. The grain being heavy falls to the ground, while the lighter chaff is driven a little further on. If this process is repeated times enough the chaff is separated for stock feed and the wheat is ready to be washed and picked over by hand that it may be separated from the stones and dirt and put in condition for grinding. Sometimes the grain is cracked or ground in a hand mill which is usually turned by two women; more often it is sent to a mill where a stream runs one or two pairs of mill stones; in some places roller process machinery has been imported from Europe or America, and the flour thus produced is as good as necessary. Only there is not enough of it. The people often scrape their flour bins a good while before the next crop is ready to be eaten.

Naturally the tools and implements employed are as crude as the methods of agriculture. Many of the tools are home made, and are about as clumsy, heavy and ineffective as possible. A fork is actually often made by selecting a forked branch or sapling, roughly shaping it, and tying on a third prong or tooth just where the original division occurs. There is then a clumsy three-toothed instrument so heavy that it would tire a man to carry without raising any grain. Shovel, rake and hoe handles are similarly heavy and awkward. There is little labor saving machinery for use on the land. Absolutely no cultivation of growing crops is done

by animal power; everything is performed by hand, but there are decided limits to the amount of ground that can be hoed, and the depth of cultivation that is possible for a pair of hands wielding this instrument. Crops requiring cultivation can hardly be produced on a large scale without labor saving machinery and animal or mechanical power. It is gratifying to be able to add that occasionally American reapers, mowers and other agricultural instruments are seen in the fields of Turkey. Like the swallows, they are harbingers of many more. There is no doubt that America leads the world in production of labor saving machinery for farmers. When normal conditions prevail, a combination of business and philanthropy should send a stream of agricultural machinery and tools to cultivate the fields of Asia Minor. Consul Jackson of Aleppo stated in his official reports, it is "Doubtful if there is a field in any part of the world offering such brilliant prospects for the exploitation of American-made agricultural machinery and implements" as the Aleppo consular area just where Asia Minor, Syria and Mesopotamia join one another.

AGRICULTURE IN SYRIA.

Syria may be well compared with Italy in size (114,530 square miles), shape, climate, configuration and natural resources, while its human affairs have been linked up for 400 years with Turkey and the Turks. The axis of Syria runs north and south, and the whole country is divided into three parallel strips or ribbons. Its 400 miles of Mediterranean coast line is the threshold of what is properly termed the Levant. There is a coast ribbon of lowlands, narrower at some points, wider at others, represented by the fertile and famous plain of Sharon; the next strip contains the mountain axis of the country suggestive of a great tuning fork with its stem to the south and branching toward the north into the parallel Lebanon and Anti-Lebanon ranges with "Hollow Syria" between; the third natural division or ribbon consists of a broad band of steppes, which fade away toward the east into the Syrian desert, — desert only because, like the Great American Desert, it lacks sufficient water and cultivation to be highly productive. The one desert can be conquered as the other can be. Syria, then, like Asia Minor, has its contrasts of high and low, wet and dry, hot and cold, fertile and barren, alluvial and rocky, all within a compara-

tively narrow compass. The shore of the sea has its havens for ships, and the shore of the desert its havens for caravans. Jerusalem, Damascus, Antioch, and Aleppo are the historic cities of the interior that still represent human authority and activity; Jaffa, Beyrout, Alexandretta, are the harbors, with Haifa and Tripoli as railway terminals of growing importance for the exchange of the business between sea and shore.

The agriculture of so great and varied a country deserves consideration by itself, though most that has been said of Asia Minor applies in Syria and does not require to be repeated. So much history has been made in the Holy Land and its neighboring provinces that it is hard to realize its present and future possibilities as a home for common people, free from warfare, clash or turmoil, every man dwelling under his own vine and fig tree and with his children as olive plants around his table. Ingersoll declared that not even a Chicago real estate agent could describe Palestine as a land flowing with milk and honey, but the great orator was rather famous for "mistakes." Wheat is regarded by some authorities as indigenous in the country, and there are large wheat and cereal areas in the districts east of the Dead Sea, the Hauran, the plains around Antioch, Aleppo and Commagene, and many smaller areas elsewhere. Rice is grown in the swamp lands in the upper Jordan as a sample of what may be done. All the ordinary vegetables and garden produce of temperate and sub-tropical climates grow if reasonably cared for and watered. The Russian government has introduced the cultivation of tea around Batoum, and thereby established a very important industry. One easily believes that the natural conditions in Syria would be equally favorable for tea gardens. Egyptian *durra* or millet grows well. And at this point we reach an exceedingly interesting fact. The redemption of the Great American Desert, a thousand miles from north to south, and five hundred from east to west, is in process largely owing to the development of three classes of crops: wheat, probably native in Mesopotamia; the alfalfas, originally brought from Media on the border of Asia Minor, and the sorghums. Now *durra* is a sorghum crop as are kafir, milo, feterita, kaoliang and broom corn. All these and kindred varieties are considered by botanists to have been developed from the wild plant, *Andropogon Halepensis*. That is, their original habitat is the region of which Aleppo is the center,—*Halep* in native pronunciation.

The olive is regarded as native to Syria, and the same is held by many with regard to the vine. Certainly, in spite of all handicaps, Syria produces quantities of olives and grapes as well as oranges, lemons, figs, apricots, pomegranates, dates, and various other fruits. Within a few years the orange groves of Jaffa have become famous for their production. It is calculated that 13,000 acres produce a million boxes of oranges a year, and what are 13,000 acres? — a mere bagatelle in area. Mulberry trees thrive, and silk growing is "the chief cash asset." The castor bean grows wherever a seed is dropped, and a great oil industry is ready to hand. In the Lebanon, where a measure of improvement is due to the French influence, it is wonderfully gratifying to a visitor to see the mountain slopes covered with mulberry trees as well as other fruit trees and pines which have made their willing response to the patient labors of the Lebanese. Of fiber crops a native flax grows wild, and must have furnished the first raw material wrought into "damask" linen at Damascus. Cotton is grown just enough to show what can be done when it is efficiently attempted.

MESOPOTAMIA.

The Mesopotamian *vilayets* of Basra, Bagdad, and Mosul cover an area of 143,250 square miles,— larger than that of Austria; with a population of 2,000,000,— less than that of Vienna. This is the cradle of the human race. And the country itself is cradled in the embrace of two rivers of life-giving water. Human existence is more easily maintained in Mesopotamia, the primitive human needs for food, clothing and shelter are more easily met, than anywhere else on earth. The climate is praised by our friends who are at home there, as the climate of Southern California is praised by our other friends who make their homes there.

Mesopotamia is the country of the Garden of Eden and of World Empires, of Noah and Nineveh and Nebuchadnezzer, of Abraham and Alexander and Arabs, of Cyprus and the Caliphs, of Seljuk conquerors and Shia heretics, of Haroun-al Rashid with his royal palace and Abd-ul-Hamid with his private estates, of Babylon and the Berlin-Bagdad Railway, of Turkish occupation and Teutonic ambition. Mesopotamia has a past that is brilliant with all the colors of the rainbow, a present that is decidedly shabby genteel, and a future that may be better than anything the people

of that dejected country have witnessed yet. Given just and stable public institutions, the natural conditions for human life and the pursuit of happiness are unsurpassed anywhere.

The soil of upper Mesopotamia is to some extent stony, but the lower part is exceedingly fertile alluvium washed down from the mountains of Ararat, and the Taurus and Zagros ranges. The soil, the sun, and the water combine to favor agriculture. The surface is less arid than Egypt, and generally offers grass on which the flocks and herds find pasture, and the camel caravans browse their way. From Hit on the Euphrates, and Beled, just below Samara on the Tigris, the rivers wind through approximately one thousand kilometers of delta to the Persian Gulf.

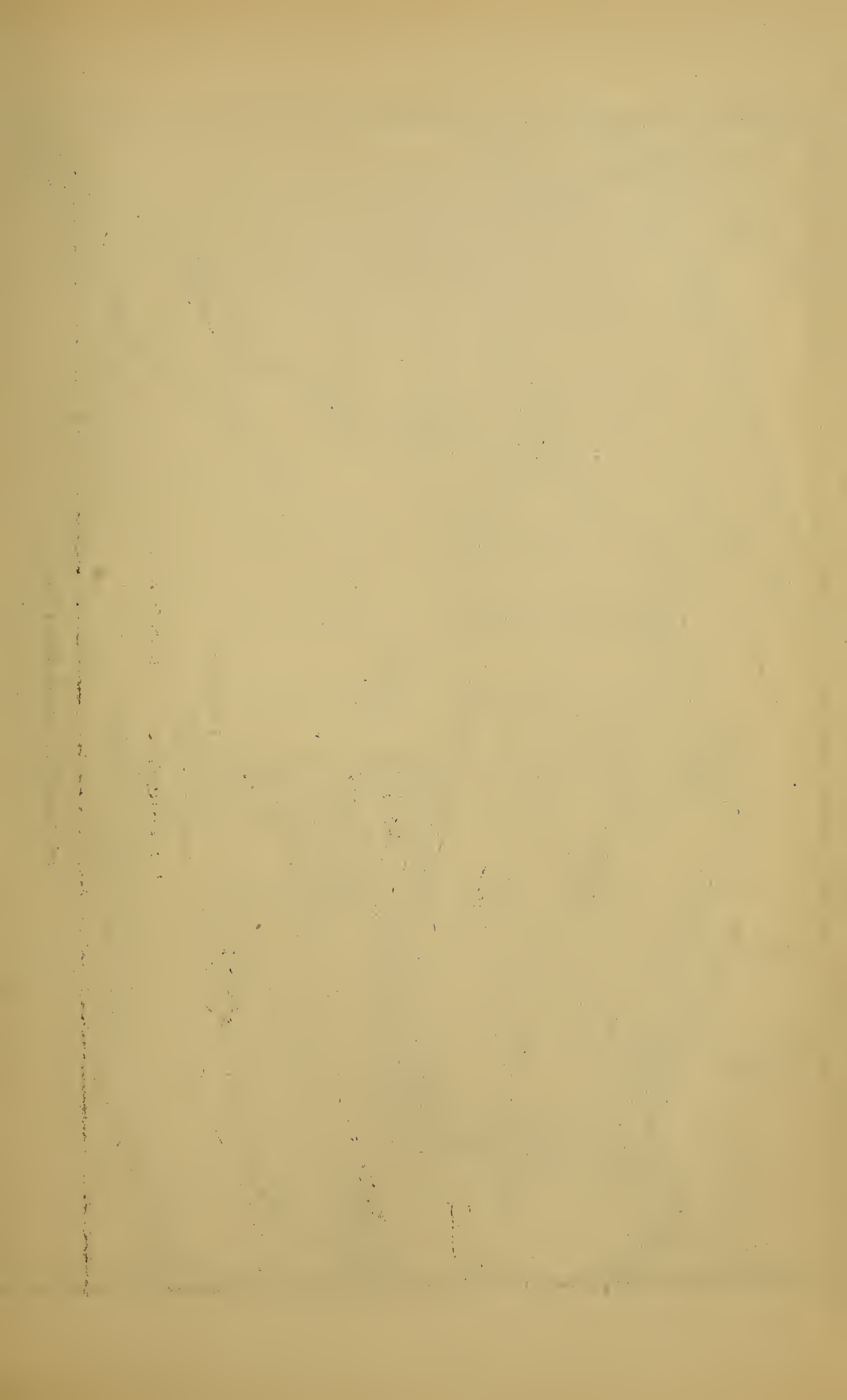
Of the three principal cities, Mosul on the Tigris is farthest inland and represents the faded glories of old Nineveh which stood on nearly the same spot. It is a seat of provincial administration and is the one important collecting and distributing center for its territory, with those petty shops and stores, those simple arts and crafts, that are required by the sparse settlements of primitive tribesmen. Down the Tigris is Bagdad, the metropolis and real capital, with its memories of great caliphs, repeated conquests, and its habit of governing. The market and bazaars handle exports of grain, wool, fruit, principally dates, Arab horses, oriental fabrics, hides, gum tragacanth, licorice, leather articles, and sundries; and manufacture copper utensils, cloth and felt. Basra is at the head of navigation by sea, and was once on the sea shore, but the combined rivers have built the land out sixty miles farther to Fao as a secondary port. " The Venice of the East " forwards the traffic of all its Mesopotamian hinderland, including that brought from Bagdad by British and Turkish river steamers. Among the principal imports are iron, copper, rice, sugar, coffee, indigo, drugs, European and especially British manufactures, and general merchandise. Basra ships annually 60,000 tons of the finest dates, and is reckoned the chief date market of the world. There are 10,000,000 date trees in the Basra groves. Below Basra is the extensive refinery of the Anglo-Persian Oil Company. The oil itself comes from Ahwaz, 150 miles away on the Karum River in Persia, flowing down by a pipe line. After being refined it is pumped into barges and so emptied into big tank steamers which carry it away to its important place in the commerce of the world.

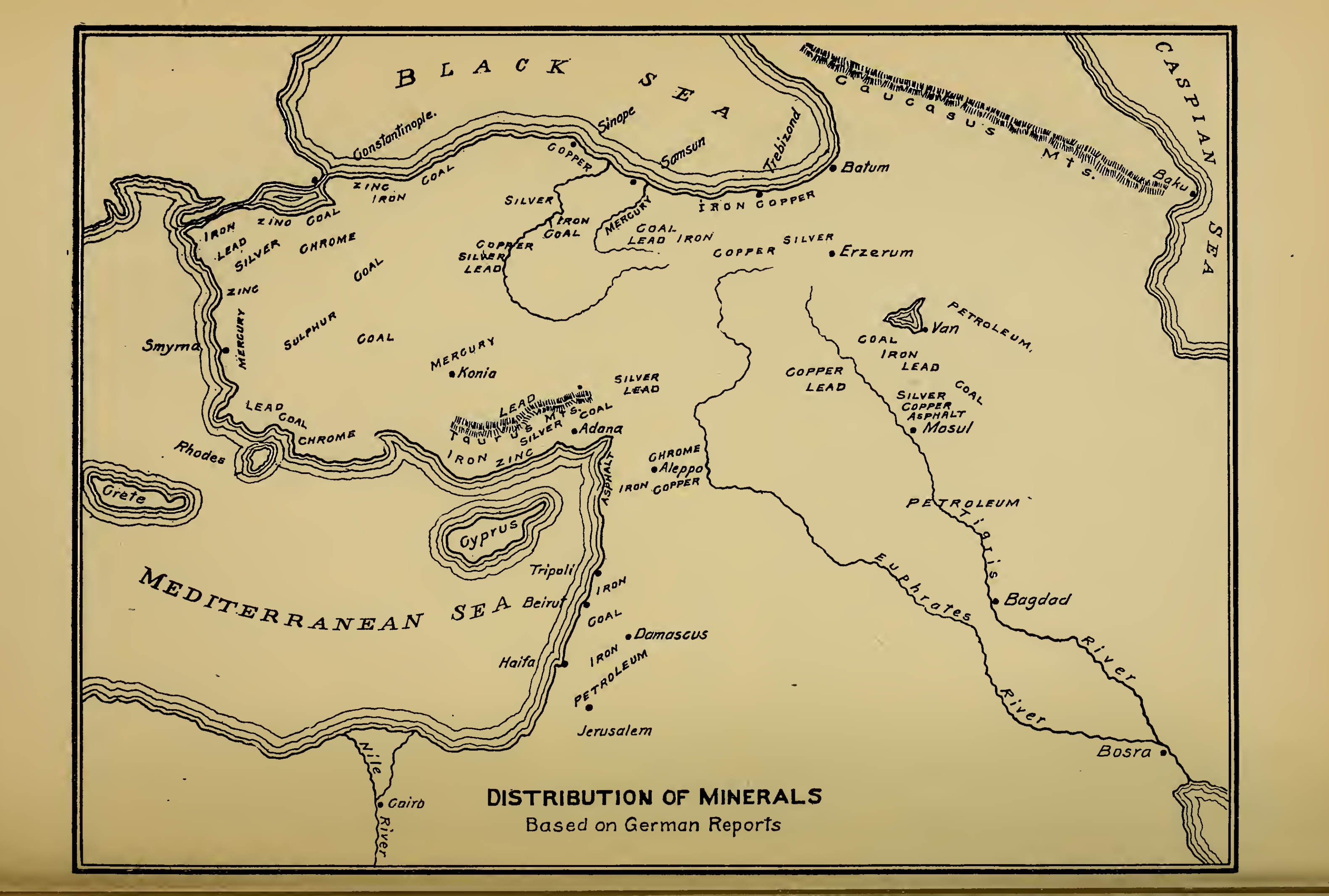
The oil industry has not been much developed in Mesopotamia as yet, but there is reason to believe that there are rivers of oil under ground and that it is only a question of time and method when they will be tapped to add their stores to the world's supply.

"Mesopotamia is all Arab country." Outside of the cities the inhabitants have not quite passed from the semi-nomad stage of the Bedouin to that of settled modes of life. A family builds a habitation in a few hours and abandons it without regret. They plow a field, cast in the seed, and visit it at harvest time to see what has happened. The great friends of the country are the Tigris and Euphrates Rivers, which, with their canals and branches, water the earth and are the arteries of communication. And the great enemies of the country are the waters of these same rivers when they get beyond control. It is reckoned that on an average floods sweep away crops and seed one year in three. Fortunately the first great problem of Mesopotamia is comparatively simple. That problem is the control of the water.

In 1909 the government of Young Turkey engaged Sir William Willcocks to proceed to Mesopotamia and plan a system of reclamation works. Two years later his report was submitted, and within three years more the engineering firm of John Jackson Limited, had completed the Hindiyeh Barrage on the Euphrates and was at work on the Habbaniyeh Escape, when all such enterprises were interrupted by the outbreak of war.

Mesopotamia had been covered with a network of irrigating canals in remote antiquity. Sir William tells how he himself walked along an old canal 250 miles in length which irrigated 1,500,000 acres, and how, when the head works were swept away by freshets, over 2,000,000 persons died of hunger in a year or two. The modern engineer planned largely to follow old lines and reconstruct what had gone to ruin. His scheme called for a series of barrages, reservoirs and irrigating channels to control the streams, water the land, and maintain and improve navigation in the river channels. It involved the reclamation of 7,000,000 acres to be irrigated if the water were sufficient and the population increased so as to need it. Even this would be only about one-half of the delta land, and there are other and great possibilities beyond. Even with 7,000,000 acres reclaimed that area would be greater than the





DISTRIBUTION OF MINERALS
Based on German Reports

arable land occupied in Egypt. Sir William reckons that the ordinary Egyptian farms of the well-to-do average less than two acres each. At this rate, and with five members to a family, Mesopotamia should easily support an agricultural population in excess of that of Egypt, a seven-fold increase.

One would like to see those thirty British engineers and thousands of Arab laborers who began reclamation work in Mesopotamia. He could then easily visualize some of the results to be brought to pass in the decades to come: the happy homes, the social order, the common schools, the produce of the soil, the farm machinery employed, the flocks of sheep and goats, the property accumulated, the trade along the rivers, the business tributary to agricultural development, the commerce, the banks, the importing and exporting houses, the predatory disposition falling away with the disappearance of nomadic habits, the methods of democracy introduced, the golden era of the caliphs eclipsed, the fear of God and the love of God prevailing with peace and good will among men.

INDUSTRIES IN TURKEY.

We pass now to review the industrial, the mechanical and manufacturing activities in Turkey, which are even less developed, if possible, than the agricultural.

Mining.

The mining industry must be approached with diffidence from the very nature of the case. Its treasures do not lie on the surface. They could only be described fully and accurately after thorough examinations by competent mining engineers, and such researches are yet to be made. It is generally believed that the mineral resources of Asia Minor are varied and rich, though some of the best authorities are rather sceptical except as regards coal. Copper has been mined in different sections from time immemorial. The mines at Tocat have been worked until within the memory of living men they have fallen into disuse. Rich copper deposits are reported along the Halys River, and water transportation might be an advantage in shipping the ore. Arghuni Maden is famous; the deposits are rich and extensive. Three out of six known mines are now in operation and the ore contains 70% of copper. Publi-

cations of "The Mineral Industry" report the copper production of Turkey at less than one thousand tons per year.

Greek miners have always found more or less silver. Gumush Hane above Trebizond means "Silverton" and is named from the extensive mines in that region. A colony of Greeks was brought from that district about four generations ago to Gumush Hadji Keuy in the mountains of which silver mines have been worked from the time of the Romans until within the last twenty-five years.

Among the recesses of the Tavshan Mountains I one day fell in with an old miner. As we picked our way among the slag from abandoned shafts I asked him whether the mines were worked out. "Whew," he said, "the mountains are full of silver." He did not speak with scientific information, but he had had the practical experience of years of working in the mines under ground. Silver is reported near Hekim Han in the Smyrna region, at Akdagh Maden near Yozgat, and the Bulgar Maden in the Taurus Mountains is one of the richest in all the country. This last is said to produce 2,600 kilograms of silver and 400 tons of silver lead per annum. Turkey produced in 1914 silver to the value of $834,600 which is really a large sum.

Some traces of gold are found in the silver of Bulgar Maden, and grains occasionally appear after torrential floods in the Mamouret ul-Aziz province, but the mines of Crœsus seem to have been lost to sight.

Lead is produced in the Konia province. A Scotch engineer employed by a mining company at Kerasoun on the Black Sea told the writer that there were valuable mines of coal, silver and copper in his district. There is galenite, — "mountains of it" at some places. Chrome iron ore is found near Mersine, at Macri near Smyrna, and there are indications of deposits, probably plentiful, elsewhere; there is mercury at Sizma near Konia and elsewhere; emery is abundantly produced in the Aidin province, manganese and sulphur at various places; there are borax mines at Sultan Chair; some asphalt is produced. A government monopoly handles large quantities of salt which are produced by the evaporation of salt water at the lakes of the interior or in mineral form as at Iskilip.

Coal is the one mineral undoubtedly found in abundance in

Turkey. The atlas published in connection with the "Coal Resources of the World" locates known deposits at about four score points. The coal basin of prime importance is that of Eregli or Heraklia, Cozlu, and Zoungoultag on the coast of the Black Sea 140 miles east of Constantinople. The reserves here are extensive and have been exploited with growing returns by a French company. Many of the steamers coasting in the Black Sea take on their coal here, and great quantities are shipped not only by steamer but by sailing vessels to Turkish and Russian ports on the Black Sea. The production of these mines increased tenfold in twenty-five years prior to 1914. There are beds of lignite at a number of places on both sides of the Dardanelles. There are indications of coal in various places in the Konia and Smyrna provinces though the quality is apt to be inferior. Some coal is mined and burned in the region of Harpout, and a basin of anthracite is supposed to exist near Palu. The writer has found combustible coal on the surface near Zile. Some years ago an Armenian graduate of Anatolia College opened a mine of fairly good and pure bituminous coal near Marsovan with a thick vein cropping out to the surface. Its use for heating and cooking was rapidly increasing in Amasia and Marsovan, and it was used for the dyeing industry when, on the outbreak of war, the owner and developer was sent to court martial. He never came back and the mine fell into disuse. Turkey produces nearly one million tons of coal per annum, more than three-fourths of it being from the Eregli mines. The Eregli belt of bituminous coal is supposed to be forty miles long.

In Syria iron mines have been worked to some extent from days of old; salt is produced in both rock and fluid form; there is coal in the Lebanon though of inferior quality; while bitumen, asbestos and sulphur are abundant, and rich prospects of petroleum in the Dead Sea region have been established.

It is not certain how far the rich oil deposits, which reach all the way from Baku on the Caspian Sea through Persia and Mesopotamia to the Persian Gulf, extend to the west, but it is almost certain that further exploration will discover great stores that have not yet been brought to light. Oil is found occasionally on the surface of some rivers, also in the region of the Dead Sea, and shale has been picked up in various places bearing a combustible oily substance. The oil areas await adequate exploration.

Mesopotamia, being largely of alluvial formation, could not be expected to be rich in minerals, and few indications of valuable reserves are noted.

Limestone is the commonest stone seen in the country, and it is worked principally by Greek masons for constructing houses, bridges and public buildings. Granite and sandstone are found; the Hittites wrought chiefly in basalt, and their cyclopean walls are still to be seen in many places. Marble is common, and there are famous quarries of gray, black and rose marble at Sinnada near Afion Kara Hissar. Beautiful alabaster is found at the Hadji Bektash Tekyeh not far from Kir Shehir. About a mile from the Anatolia College campus in the mountain foot hills a fine quarry was located a few years ago, the stone from which is said to be essentially the same as that of which the Cologne cathedral is constructed. This has been used in the newer College buildings. In Syria beautiful limestone and marble have been quarried and used for the construction of buildings of the better class ever since the days of the temple of Solomon.

Fishing.

Wherever there are Greeks there is fishing, and there are Greeks along all the coasts of Asia Minor and the Levant. But the methods of fishing employed are crude, and the catch does little more than contribute to local needs. The fish markets of Constantinople and Smyrna are extensive and well supplied. The fish business in Constantinople is reckoned worth a million dollars a year. People who dare not talk and think politics like to talk and think about the fish they eat. Mullet, tunney and turbot, and many other fine kinds of fish are found in the waters of the Black Sea, the Marmora, the Aegean and the Mediterranean. Sardines are handled in quantity at Smyrna, and some tunney fish are canned there. Abundant sardines are reported to be found in the Lake of Galilee. In the Black Sea dolphins are taken to some extent for their oil. Local fishermen find considerable opportunities for their art in the fresh water streams and interior lakes. Some years ago a colony of Cossacks located at Ladik and have thriven in the business of catching and selling fish from the lake. No effort by government officials is reported to maintain or replenish stocks.

The Syrian coast has long been famous for its sponge fisheries, and in 1912 the yield was 11,280 pounds.

Manufacturing.

Turkey produces raw materials and can produce more; hitherto the people have developed neither the skill nor the capital nor the power for extensive manufactures. But skilled workers may be trained, conceivably capital from outside may be profitably invested, and there are coal, oil and water in the country for the production of power.

In general existing industries are small; they have originated in connection with the homes of primitive peoples, and still remain in a backward condition. One of the first needs was for mills to grind the cereals, and the simplest form was constructed of two mill stones made to turn one upon another, and worked by a woman to feed her household. Many of these mills are still used. Most of the flour of the country, however, is made of wheat or other cereals in the small mills which are found all along the water courses wherein the grain is run over a pair of stones, and the miller takes one-sixteenth of the flour as his pay. Some roller process machinery has been introduced in recent years, as in the great mills of the Cheltek gorge fifty miles from Samsoun, and such mills produce flour good enough for anybody. Trade through the harbor of Samsoun is large.

Dairy products of butter and cheese, and also animal fats, are prepared in almost every home. The fat is principally derived from the tails of sheep, some also is prepared from beef tallow. There are no butter or cheese factories, and Danish butter and Dutch cheese may be found among the stocks of the better markets. The evaporation of milk for commercial purposes has begun in Smyrna and Konia.

Asia Minor, Syria and Mesopotamia, are distinctly fruit countries, and considerable quantities of fruits are dried, though little is done in the way of either canning or preserving for commercial use. Smyrna has a great trade in figs and raisins, and the raisins of Behsne have their local reputation, as would be the case with the products of other localities if there were facilities for distribution. An excellent syrup, *pekmez,* made of grapes, or sometimes of mulberries, is manufactured in many homes and is an article of trade in many cities. Molasses from the pod of the carrub tree is considered preferable to New Orleans molasses for cooking purposes by the American ladies resident in Syria. Dried apricots and dried

peaches find their way into the markets to a considerable extent, as do dates from Mesopotamia and Syria. Makers of candies and sweetmeats have their shops in different places. "*Rahat locum*" or "Turkish delight" is well known to travelers. Nuts are much used in making these sweetmeats, and quite an industry is developing now in cracking walnuts and picking the meats for shipment to European markets. The making of wines and liquors has been common from the earliest days, and they are extensively made and handled throughout the East, particularly by Greeks.

The olive is one of the most gracious of trees and fruits. It grows easily and abundantly in the warmer valleys, and great quantities of green olives, black olives and expressed olive oil find their way into the trade of the country and into its foreign export, especially from Smyrna and from Syria.

Orientals are fond of personal adornment for the men, the women and the children. They also decorate their homes with many fancy trinkets, and covet handsome trappings for saddles, bridles and weapons. Goldsmiths and silversmiths, therefore, are important members of the community, and ply their trades with the organization of primitive guilds. Iron for agricultural and simple mechanical purposes is worked by blacksmiths everywhere, and copper hammering and molding are a very important industry. Every household covets a supply of copper utensils, and these are practically all fashioned in the local markets and repeatedly "whitened." Locksmiths and gunsmiths ply their trades everywhere among people, who either want to use weapons or want to defend themselves against danger. Enormous quantities of petroleum, principally from Baku, are shipped into the country in tins, and tinsmiths work up these cans to serve a thousand and one different purposes.

All the ordinary farm implements in use are made locally, including plows, shovels, forks of different shapes, hoes, picks, winnowing shovels, threshing sledges, ox carts, springless load wagons for the roads, spring wagons, and decorated landaus for travelers. Ship and boat building is a great industry carried on particularly by Greek and Turkish carpenters on the Black Sea coast.

Cabinet and carpenter work are growing in importance with the rising scale of living and the introduction of more European

methods. Chairs, tables, stands, cradles, bedsteads, desks and various articles of household, store or office equipment are produced in small workshops. The power is practically all hand power, and the tools are clumsy. Most of the lumber is sawed by hand, though occasionally saw mills turned by water power may be found on the edge of or in the midst of magnificent forests.

Inferior grades of olive oil supply an excellent staple for soap making, and much is produced on the shores of the Levant. There is an opportunity ready to hand greatly to increase the output of this useful article of manufacture.

Castor beans and sunflowers grow readily and if they could be cultivated in paying quantities a new industry would open in the manufacture of castor oil and sunflower oil. In the Russian Caucasus sunflowers are raised not only for oil, but the stalks are burned and the ashes turned into carbonate of potash. As the production of cotton develops, cotton seed oil may become an important article of commerce in this age of oil. There are also possible certain essential oils such as mint, almond, and orange flower water, this last is already used in many native confections.

Every archaeologist is familiar with the fact that enormous quantities of pottery have been made in the country from the very earliest times. At the present date roof tiling is the one good covering for buildings. Flat floor tile are made and used to a great extent, and clay piping of larger or smaller size is commonly employed both for fresh water courses and for drainage purposes. Good deposits of clay for the work of the potter are easily found, and many jugs, jars, vases and other articles of pottery ware are everywhere in the markets.

As the country produces an enormous quantity of hides and skins, and employs a corresponding amount of leather, my College classes in political economy have been instructed that tanning is one of the most hopeful industries for development in the country. A beginning has been made, but great wagon loads or caravan loads of pelts on their way to Europe are frequently seen on the roads, and all the better leather required in the country is imported from Europe.

Several articles required by tanners grow wild in the forests, and a beginning of tanning was made long ago. There are tanners at Harpout, Marsovan, Konia, and doubtless other places. But

an industry possibly great is just in its infancy. Shoes of all sorts, boots, slippers, belts, and saddles for pack animals as well as riding saddles are made in all the principal markets. In this connection it may be remarked that the use of fur for outer garments is very common, and many small water animals with fine fur are taken, and their furs as well as those of foxes, wolves and other large animals are dressed, cut and shaped by the tailors to supply a large demand. Many prayer rugs are made of dressed skins of animals.

There are some factories in the country operated by foreign capital. For example, there is a large American tobacco factory in Samsoun, and there are several establishments turning out glass, cloth, cement and other products at Constantinople and Smyrna.

Textile Industries.

Wool and hair from their sheep and goats and camels are among the most valuable assets of pastoral people. The first manufacturing process was the making of felt for blankets, saddle cloths, travelers' hoods and capes, carpets, tents and the like. And there is much felting used in Turkey, all made by hand power. "Cilicium," a tent cloth of black goats' hair, is still made in the Tarsus regions as it was in the days of Paul. The peasant farmers very generally spin part of the clip of wool into home-spun thread with distaffs and hand spindles, dye it with home-made stains, and knit it, or weave it on hand looms in their homes. A primitive example of textile industry may often be seen beside the tents of nomads when a long warp is stretched on the ground by means of pegs and a weaver, man or woman, throws the shuttle that works in the woof. These processes are decidedly crude, but rather effective. Bleaching, spinning, dyeing, knitting and weaving different fabrics continue in the East after the more or less primitive fashions that used to prevail in the western world. The gypsies of the country are generally sieve and basket makers, and carry their wares to every village and almost every door.

In the cities of the country one of the most important industries, perhaps the most important of all, is the weaving of cotton cloth by women on hand looms in their homes. The introduction of woolen mills has been considered by some business men who weave cotton on a large scale. A spinning factory has been established

as an experiment at Harpout, and quite large cotton factories are operated at Adana, Tarsus and Mersine, which take up a large part of the cotton grown on the famous Adana plain. The scale of living in the country is such, and the scale of earnings on the part of the men is such, that women besides caring for their homes often have some time which they can devote to work for wages, and their wages are needed by the family.

There is a very great trade in cotton thread of different colors imported from Manchester and other cities in Europe as one of the largest items of the wholesale business of the country. Long warps are made by the merchant manufacturer, and these are distributed among the women in their own houses, and they weave them as they have the time or the need. Wages are low, but they furnish a valuable addition to the income of the common people dwelling in the towns. Much Turkish toweling similarly is produced, though in this case the weavers usually are men, and the work is done in small factories. Following the massacre in 1895 we maintained in Marsovan a relief work in weaving in which 150,000 yards of narrow gingham cloth was manufactured in addition to a quantity of toweling. The product was sold on the common market and the money invested turned over repeatedly without loss. Other mission stations in Turkey engaged in similar enterprises and some of them on a larger scale.

There is a good deal of dyeing in the country tributary to the weaving, and at least one graduate of an American college has an establishment where dyeing in fast colors is done with improved methods. Formerly vegetable dyes made from beets, saffron, onions, pomegranate rinds, walnut leaves, and above all yellow berries were locally prepared and were of much greater worth than the chemical dyes which have largely superseded them.

The word "damask" is a reminder that some of the first fine linen known to men was woven in the "oldest city of world," probably from such flax as still grows wild in the lovely fields of Syria.

There are silk factories where the mulberry and the cocoons thrive in the regions of Amasia, Brousa, Smyrna and other places, principally in Syria.

Rug weaving was perhaps first devised and has reached its highest attainment, except possibly under the most advanced

scientific methods, in Turkey and regions adjacent. The art is handed down from parents to children for generations, and little girls of six years old show a ready aptitude for the work. Where they laugh at the proverb which says, "Time is money," where wages have been the lowest possible, where patience seems inexhaustible and where the work of the loom is often primarily designed to adorn hearth and home, the weaving of rugs has flourished. The wool grows on the backs of the sheep, dye stuffs grow in the forests and the field, and labor is ready to hand for the weaving, which grows toilsome only as the strain of life increases. The Oriental Rug Company at Smyrna and some other manufacturing establishments, as at Sivas, were making rugs of the old patterns but with a new system of factory weaving before the war began. A large trade in oriental rugs has been developed, especially with the United States. Armenians are particularly skilled in this branch of manufacturing and mercantile business, and it is interesting that some of the Armenians of this country are aiming to establish industries in rug weaving in their native lands, when war conditions permit, partly for business purposes and partly as a relief measure.

Embroidery and lace work are skillfully done by the women and girls of the Orient. A large trade in the product was in process of development with foreign countries, particularly America, when war conditions supervened. This industry, indigenous in the East has been particularly pressed in some cases as a relief measure or for the industrial employment of women workers by missionaries at different points. Wherever orphanages have been maintained in the country by European or American representatives since 1895, rug making, cotton weaving, embroidery and lace making have been taught to the girls almost without exception, and thus numbers of young women have been provided with an industry by which they could usefully support themselves.

To give a further brief glance at the special industries open to women, Miss Mary Caroline Holmes emphasizes the two groups of women, Moslem and Christian. (See Report in this volume "Status of Women.") Up to the present war the former had no occupations outside their homes. Farmer women share to some extent with the men folks of their families in the work of the field, the barnyard and the garden. The women also cultivated silk

worms, distilled orange and rose water, crocheted, some of them with rare skill, and embroidered to a certain extent, and the products of these efforts may be commercialized. The occupation of women in spinning, knitting, and above all weaving, has been referred to and does not require further emphasis here. The Christian women of the country have more opportunities of working for wages, for example, as teachers, sewing women, domestics, employees in silk mills, and a few as clerks in shops. Nursing as a profession has been made possible by the training schools for nurses in connection with Anatolia Hospital and the Syrian Protestant College. Practically all the American schools for girls in Turkey include dressmaking, cooking, and other branches of household economy in their instruction. Home products that may be sold include kerchiefs, veils and their needle work edges, underwear for women, stockings, dried or preserved fruits and conserves, and very fine lace. A United States government inspector affirmed that Syria was rapidly taking the first place in the production of Irish lace, and might become the world center of that industry. The old embroideries have their place almost as definitely as oriental rugs. Bottled milk and cream, butter making, cheese making, poultry raising, bee keeping, fruit canning, the making of jams and jellies and other household arts may be made more profitable pecuniarily. The present war is so decimating the numbers of men that women have already been forced to become bread winners to a greater extent than ever before, and there will be a strong impetus in the same direction for many years to come. The industries of Turkey as of other lands, must be carried forward in good part by women taking the place of men.

Vocational Education.

The subject of education does not belong to this paper except incidentally, but the view presented would be incomplete, and therefore misleading, if we omitted to emphasize the need for commercial and industrial as well as agricultural education in Turkey. The whole country has been wrecked by war. Men of soldier age have been swept away. Reconstruction must begin at the foundations. Survivors of the great catastrophe must be taught in the shortest time how to make a living and how to carry on the economic and industrial life of the great areas involved. To fit the

new generation of men and women in Turkey to make their economic world a fit place to live in, not only is training in agriculture essential, but schools or courses should certainly be provided. For the girls and young women in:

Cooking with the canning of fruits and vegetables and the handling of milk and its products.
Dressmaking and sewing.
Weaving cotton and woolen yarns.

For boys and young men in:

I. Commercial theory and practice.
II. On industrial lines at least in:
  Carpentry, practice and theory;
  Cabinet making, practice and theory:
  Electrical construction and theory;
  Machine shop practice and theory.

WAYS AND MEANS OF IMPROVEMENT.

A retrospective view of the facts and conditions in Turkey is really pathetic, and one receives a strong impression of natural resources vast, varied and rich, which have hardly begun to be developed and utilized, while the common people, whom the Lord must love because he made so many of them, are poor, suffering and helpless. Less than 25% of the tillable area is under the plow, and less than 50% of the natural resources of the cultivated area is productive. The great need is for a more intelligent use of the resources of an imperial domain, and the scale of effort suggested is such as to deserve the attention of a cabinet minister, or better, of departments of agriculture and of industry with their respective bureaus. This however, is a field in which, as is often the case, it is probable that philanthropy must point the way and begin to move.

One naturally supposes that after the war just and stable public conditions will be maintained by the government; that transportation facilities will be supplied, banking and capital for development will be available to some extent, and perhaps that the *vakoof* properties, or religious endowments which control so large a proportion of the land, a part of a feudal system still remaining, may be revised. Then certain simple aims present themselves, for example, in agriculture, introducing or increasing the production of:

Wheat and bread,
Cotton,
Alfalfa,
Corn, the sorghums and sugar-cane,
Sugar beets,
Olives and olive oil,
Oranges, lemons and citrus fruits,
Vegetable oil plants, e. g., the castor bean,
Nuts.
Hemp and flax.

In the industrial realm also, establishing or improving:

Cotton weaving,
Woolen weaving,
Rug making,
Dyeing,
Tanning,
Soap making,
Fruit and vegetable canning,
Meat and fish packing,
Butter and cheese making,
Biscuit and cracker production.

Agricultural improvement calls primarily for the following measures:

1. The introduction of improved methods of agriculture including the principles of dry farming in America and an extension of the existing systems of irrigation.
2. Better animal husbandry.
3. The introduction of modern agricultural implements and machinery.
4. The introduction of improved methods in horticulture, including truck farming, fruit trees and nut trees.

Better Methods in Agriculture.

The main problem is simple. Turkey is primarily adapted to the production of cereals, legumes and stock. And these fit admirably into a system in relation one to another. The first broad aim is to produce cereals; to do this to the best effect, rotation crops are needed, preferably intertilled and preferably legumes; and to take up the produce of the farm, diversify its output and retain the fertilizer for the soil, the flocks and herds should be maintained.

American agricultural science offers the above plan as its best proposal for a general agricultural country, and these are exactly the lines on which, in a blind way, the Turkish farmer is groping. It is remarkable that the "dry land system" in this country is practiced in principle by the Turkish farmers. This is done by summer fallowing, and in theory by frequent cultivation. Turkish farmers hold that the land must be allowed to "rest" one year in two or three or four. And the aim is, though not usually the practice, to keep the soil free from weeds and vegetation by means of

the plow. American agronomists tell us that in this way a percentage of the moisture is accumulated in the soil and stored for use another year. The standard teaching now is, however, never to leave the land fallow, never to allow it merely to "rest," but to rotate with different kinds of crops and different kinds of cultivation. The best soil builders are legumes which are at home in Turkey and are highly valuable products in themselves. Finally, the people of Turkey take kindly to the keeping of stock by means of which not only are farm operations diversified, but the humus and fertilizers can be supplied for the hungry soil better than in any other way.

In America, irrigation is habitually thought of in terms of great corporate or government enterprises. Projects on a grand scale are necessary for such enormous areas as are spread out on our western plains. But the Turkish mountains criss-cross the level stretches at frequent intervals. These mountains accumulate stores of water with which the farmers easily and habitually irrigate the fields along the foothills. Numberless small and short irrigating ditches are in operation. Small reservoirs for holding water are common everywhere, and flooding a field or vineyard or garden once or twice in the late spring if not oftener is an established practice. I have heard mosque discussions as well as much other planning looking to the extension and improvement of the irrigating facilities already existing, and quite apart from great government or corporate projects for such vast areas as have been taken in hand in recent years at Adana, Konia and elsewhere. Almost limitless possibilities for the improvement of agriculture on the broad upland plains of the Turkish areas thus rise before the eyes. Progress at the rate of 10% a year compounded annually for a generation to come should be easy of attainment.

Better Animal Husbandry.

Better selection, breeding and care of farm animals would improve the quantity and the quality of their work and their products. Horses may be steadily graded up to larger size and better points, as has been the case in America, by the employment of the fine Arab stock available. For the improvement of the cattle, the introduction of breeding stock from Switzerland is advocated. Swiss cattle are yellow or brown in color, would cross readily with

the native stock in Turkey, and would result in better oxen for draught purposes and better cows for milk and milk products. A possible alternate to the Swiss cattle would be Jerseys or better, Guernseys. The native sheep and goats are of first rate qualities, but more intelligence in their handling would increase the numbers, diminish diseases and enlarge the profits of the industry. Swine are omitted from consideration as undesirable among Mohammedans. Donkeys, camels and buffaloes would probably be slowly superseded by the increase of more useful animals and of farm machinery. Improvement of the poultry industry offers a great field for experts trained in this department.

Agricultural Implements.

Just as rapidly as it can be effectively done, agricultural implements, particularly the smaller tools, should be introduced from America. American farm machinery is undoubtedly better than any other made. Some machines from this country have been already introduced in Turkey, and the trade should be stimulated as rapidly as possible. Threshing machines, steam plows, tractors, automobiles, can be bought by but few because of the expense, and can be run by hardly any of the people at first. But any farmer can buy a pitch fork, use it without instruction, and add a good per cent. to the value and efficiency of his work every time he takes it in hand. Shovels, forks of different kinds, rakes, hoes, first class scythes and sickles, axes, hammers, hatchets, saws larger and smaller, plows, harrows, discs, seeders, cultivators, and even reapers and mowers are among the tools that my classes in political economy have been taught are of first and most practical importance. These are within the means of the ordinary farmers, and if they could be offered for sale with advantageous arrangements large transactions ought to result. Then, such machines as winnowing mills, corn shellers, and churns, should be in demand, also wheels, springs, and other parts of wagons. Wheel hoes would be readily appreciated, and the decimation of the animals due to war may almost force the introduction of small tractors for working the land, and motors for transportation on the roads. The general introduction of windmills or stationary engines and silos will require time.

Improved Methods in Horticulture.

Improved methods in horticulture are needed in the whole country, and especially in the deep valleys and low plains. It is not uncommon to find a village without a tree in or near it, while the kitchen gardens, if they can be found at all, consist only of little plots with a few sickly vegetables and many rank weeds. Garden vegetables, however, can be grown everywhere with all that they mean for the farmers' tables. There is no difficulty in raising fruit trees and nut trees if only there is some degree of encouragement and leadership. The hot lowlands from their semi-tropical nature, invite a partially different class of crops. In addition to cereals and other products of diversified form, they are admirably fitted for cotton, rice, sugar beets, sugar-cane and other semi-tropical products. As such intensive farming results in more congested population, truck gardening becomes more important to supply the cities. It is in these regions that some of the most valuable opportunities for fruit are found. Jaffa is famous for its oranges, and can produce a million cases a year on 13,000 acres of land. That area is a mere beginning. Probably this production could be duplicated times almost without number in Turkey proper. Crops of lemons and other citrus fruits, of grapes, figs and olives, to name only a few of the most important, are capable of almost indefinite increase. We may add in this connection that nut trees can be easily cultivated to attain the proportions of a great industry. There is a good beginning already in walnuts, almonds and filberts. These trees could be increased many times over in number and in proportionate yield, while other nuts, such as the pistachio and the pecan, could doubtless be easily introduced and would bring in good profits.

All the ways and means for agricultural improvement depend upon a process of instruction and education by example going forward among the people. Efforts to provide this training should be based upon the following lines:

1. Demonstration farms.
2. Extension courses among the farmers.
3. Agricultural schools and colleges.
4. Agricultural experiments.

TENTATIVE PLAN FOR AN ANATOLIA DEMONSTRATION FARM.

The city of Marsovan is located on the border of a fertile, alluvial plain, about one mile from the foothills. The altitude of the plain is just under 2,500 feet. The latitude is approximately that of New York City, and the climate is temperate and congenial. The winter season lasts usually about two months with snow on the ground during that time. The summers are long and hot, but the heat is relieved at night by the altitude. The rainfall as shown by the College records kept for twenty-five years is between eighteen and nineteen inches per annum. Before the war, which is the only time for which figures can be estimated, there were said to be 5,000 houses in the city of Marsovan, and 6,000 vineyards just outside, an average of more than one vineyard to a family. Among the vineyards are fruit orchards, nut trees, and truck gardens. On the north the foothills, a mile away from the College, rise rapidly to the mountain range in the background which reaches a height of 6,000 feet. It is our great desire to establish a demonstration farm in connection with Anatolia College at some location within easy reach of the College, on the plain, and preferably near the foothills.

Agriculture is the one foundation for all the economic life of the country. The primitive agricultural methods employed furnish usually just over or just under a bare living. Farmers are proverbially slow to change and introduce new methods. This is particularly the case with the ignorant, and of the farming class in Turkey probably 90% or more are illiterate. *They must learn by seeing.* They must acquire new methods by observing the use and the results of those methods. They cannot be driven, but they can be won. A college naturally trains young men chiefly for business and for professional occupations. Agriculture in Turkey does not yet offer sufficiently large opportunities for considerable numbers of educated young men to devote themselves to that industry. But a demonstration farm in connection with such a college as Anatolia would be of great value in different ways.

The plant would require the purchase of a considerable tract of land, preferably on the level and extending up the hill slopes. A house with adequate barns, stables, granaries and fencing would

be required. Stock should include horses, cattle, sheep and goats. Chickens, turkeys, geese and bees should be kept. An adequate stock of implements should be purchased, and their selection will be important because the tools should, in the first place, be those with which the common people are familiar, and then there should be an adequate outfit of the different kinds of improved machinery from America. Of course there would be initial expenses for improving, irrigating ditches, seed, grain, and fodder for the stock, and the other supplies necessary to begin the enterprise. But the purpose should be definite throughout, to commence with conditions, tools, animals and methods which are familiar to the common Turkish farmers. We must begin with them where they are, and lead them on. There must be no attempt to coerce them into adopting something new or foreign or curious, no effort merely to surprise or excite, but the aim must be by practical and successful demonstration to show that improved methods in agriculture are available, practicable for common farmers, and financially rewarding.

In practical operation the field land should largely be devoted to the staple, local crops, which are winter wheat and barley. The quality of these grains is satisfactory, but improved methods, especially deep plowing, rotation of crops, and use of fertilizer, would give increased results. Other field crops should be cultivated, particularly rye, oats, corn and potatoes; also several different kinds of legumes which are already more or less common, as beans, peas, lentils and alfalfa. A considerable portion of the land should be devoted to vegetable gardens, orchards and groves of fruit and nut trees, and to vineyard purposes. The uplands should be used for sheep, goat and cattle ranges; and should be controlled to such an extent as to ensure water supplies for irrigation, and possibly for water power and the generation of electricity. If forestry can be added, such a site would be a good place from which to carry on the work.

Good Arab horses will be available for breeding purposes if they have not been too seriously decimated by conditions of war. Heifers and bulls should be introduced, probably from Switzerland, for building up the native stock of cattle. Flocks of sheep and goats of good quality can be purchased on the local market.

In connection with the farm it probably would be wise to maintain an agricultural implement house for the sale of American

tools and machinery. A ready and growing market for all the smaller implements would exist at once, and an agency could be maintained for the ordering of such large and expensive machines as it might not pay to keep in stock.

The operation of such a plant on the smallest scale would require at least one competent American of thorough training, skill and practical efficiency as superintendent. He should be assisted by the best natives of the country, some of whom might be found among the young men that have studied agriculture in America. Common labor should then be employed as needed, but here would be a very important point in relation to Anatolia College. The College has always stressed the principle of Self Help, and has often had a hundred or more students on the rolls who were eager for work in order to pay for some part of the College bills. The seasons are such that the heaviest part of the farm work falls in the summer vacation, and the rest is pretty evenly distributed throughout the fall and spring. Many students would be glad to use their available time in working on the land and with the stock. This would provide efficient man power, would enable many young men to acquire an education to whom it would be otherwise impossible, would dignify labor, and would result in a very considerable amount of agricultural information being acquired by these students and retained in subsequent years, even if most of them were in business or professional vocations.

Such a farm would be visited by many persons of all classes, and they would always be made welcome. Marsovan itself is a center of trade and travel. The College, the Hospital and the Girls' School draw numbers of the more intelligent people to visit them or keep in touch with them.

Extension Courses.

Next, the extension course principle should be put into operation, just as fully and effectively as possible. There should be one or more men, preferably natives of the country, with adequate knowledge of agriculture, "good mixers," and effective demonstrators, who could visit the villages and communities about, give lectures, more or less formal, and demonstrations to the farmers, hold institutes, promote and observe the introduction of improved methods by individuals, circulate some bulletins, and maintain a system of instruction in scientific agriculture for the benefit of the people whom we desire to help.

Agricultural Schools.

On such a demonstration farm and in connection with an American college, some instruction in agriculture would almost certainly be developed before long. The establishment of agricultural courses, however, or a full agricultural school or college, should be preceded by the demonstration farm. But the farm would naturally, earlier or later, lead on to the school. Agricultural colleges at strategic points are a necessity to the adequate development of any country, both in order that practical farmers may be trained, and in order that teachers may be prepared for the common and high schools who are capable of giving elementary courses in agriculture to the far greater numbers of pupils who attend them and who probably will themselves be farmers. That subject should be pursued farther.

Experiments.

Agricultural experiments would naturally come later still. Our immediate concern is the welfare of the great numbers who must get their living this year and next out of the ground. Methods and results established elsewhere are sufficient for the pioneer stages in Turkey. But as soon as a more effective system is put into general practice, trained and picked men should begin experiments with a view to overcoming the particular obstacles encountered in Turkey, e. g., by soil analysis, and solving the special problems of that country.

Estimated Cost.

At this distance, and with the uncertainties due to war, it is very difficult to make an adequate calculation of the funds required for such an enterprise as is proposed. One hundred thousand dollars would be the lowest reasonable estimate, but with this we would certainly make a beginning. Its use should be divided about evenly between plant and operating fund, for example:

Land, 500 Acres,	$25,000
Buildings and Improvements,	12,000
Horses, Cattle and other Stock,	10,000
Machinery and Tools,	3,000
Endowment Invested,	50,000
Total,	$100,000

This amount would provide for the plant, the organization and equipment of which would be distributed over a few years of time, with an income of $2,500 per year from the funds invested in America at 5% interest. This income would no more than employ one competent American as superintendent. Other labor would need to be paid out of the proceeds of the farm, and this would necessitate slow progress during the early years.

A more adequate estimate would be $250,000, invested as follows, for example:

Land, 1000 acres,	$50,000
Buildings and Improvements,	20,000
Horses, Cattle and other Stock,	15,000
Machinery and Tools,	5,000
	$90,000
Endowment invested,	120,000
Guaranty Fund,	40,000
Total,	$250,000

With this larger sum a larger plant could be established and could be better equipped. Not only so, but a larger income would provide more adequately for superintendence, instruction and extensions, including the support of four trained men, for example:

Salary and Expenses for Superintendent,	$2,200
Assistant Superintendent,	1,800
Second Assistant,	1,000
Third Assistant,	1,000
Income from $120,000,	$6,000

If four men could be provided their work should be specialized as follows:

1. Farm Management and Agronomy.
2. Animal and Dairy Husbandry.
3. Horticulture, including care of Vegetables, Fruit Trees, and Nut Trees.
4. Agricultural Engineering.

The guaranty fund would provide additional resources to the amount of $2,000 per year which might be employed for improvements in the initial stages, unforeseen expenses, possible crop failure, expansion by degrees, the employment of extra labor, special experiments, extension service, to meet emergencies as they might arise, and to improve the plant. If a rather extensive plant were organized and equipped, and the cost of superintendence supplied, the income ought to meet the ordinary expenses of labor, upkeep and operation. Of the four specialists two should be preferably

natives of America, and two natives of Turkey, all educated in American colleges of agriculture.

What has been said herewith regarding Marsovan, from intimate knowledge of the situation and condition there, should be capable of adaptation, with modifications, everywhere in Turkey.

A minimum estimate for the establishment of demonstration farms in Turkey on any considerable scale should include at least six locations. If, as would be natural, they were linked up with the American educational institutions in the country, which have grown out of the missionary efforts there, one each might be established in Marsovan, the Smyrna region, Cilicia probably at Aintab, Armenia probably at Harpout, Syria, and Mesopotamia. Marsovan occupies a typical upland site, fairly characteristic of all Anatolia or Asia Minor. Smyrna on the other hand, represents the low lying plains and hot valleys. Each location should be determined with reference to the particular needs and facilities of the large areas represented.

But the area that one demonstration farm can properly influence is limited. If we reckon it as a square, one hundred miles in each direction, 10,000 square miles, there would need to be nearly thirty such farms in Turkey proper, besides those required in Syria and Mesopotamia. The American mission schools or stations in Turkey number about thirty. If fifteen of these should be suitable for the addition of agricultural work, and fifteen other strategic points were chosen, and then the means provided with which to do the work, the foundations would be laid for a system of agricultural demonstration and education that would revolutionize the conditions of human life and character among the 22,000,000 inhabitants, Moslem and Christian, that dwell in this forlorn garden area. This calls for the provision of $7,500,000.

Forestry.

It is outside the subject of agriculture proper, but so vitally related to it and to the welfare of Turkey and its people that we must note the call for an effective system of forestry. Without government action thoroughly carried out, little can be accomplished in this respect. Villagers, wood choppers, charcoal burners, and lumber dealers are hard to be controlled. The individual or the group feels little sense of responsibility for the public welfare. But wood chopping and lumbering should be regulated. So also

fuel cutters and charcoal burners. Flocks and herds should be controlled in their pasturage so that young trees will have an opportunity to grow. Goats are the worst enemies of young trees. The digging of roots should be regulated with reference to forest growth. And then provision should be made for planting and tending forest trees as is so effectually done in many civilized countries and as is so well represented, for a local example, in the Lebanon.

RUG INDUSTRY.

Gullabi Gulbenkian.

The rug industry has from time immemorial existed in the Ottoman Empire. The importance, however, it has gained in the economic life of the country, as a trade of commercial value, is of recent date. Prior to the last forty years the rugs produced in the country were almost exclusively for domestic use. It is only within the last few decades that owing to a widespread demand on the part of the European and American markets, rugs have become a commercial article and the carpet weaving industry has accordingly risen to prominence.

Originally the main weaving centres in Asia Minor were the districts of Smyrna and Cesarea; later, Sivas, Konia, and Kutahia also became important centers, and more recently, owing to the efforts of American missionaries, looms were established in Adana, Aleppo, and Harput.

The reason why old rugs are the more valuable is that they were made for personal use and hence with greater care. When rugs became an article of trade and were made for sale and exporting, the weavers, in order to reduce the cost of production, gradually had to lower their standards; and this resulted in diminishing the demand for Asia Minor rugs. Within the last ten years, however, some decided improvements were made by introducing the use of machinery for spinning uniform and dependable yarns; by establishing dyeing plants to guarantee fast colors and to produce colors in harmony with modern taste; and by having a greater variety of designs in accordance with the existing requirements of decorative art in the consuming countries, which gave a new impetus to the industry and created a large and sustained demand for Asia Minor rugs, so that the value of the total yearly exports of these rugs to Europe and America was close to five million dollars for the year 1914.

It is highly desirable that after the declaration of peace, when efforts will be made to rehabilitate the devastated provinces of Asia Minor, the same line of reforms in the rug industry be followed out in a more thorough and efficient manner.

Labor.

The first step for the re-establishment and development of the industry is to secure labor. In general, wages paid to rug weavers are very small on account of competition with Persia, India, China, the Caucasus, and Turkestan, where labor is exceedingly cheap and easy to be gotten. But as there will be a very large number of widows and orphans who will have to work for a living, it is quite likely that it will not be difficult to secure hands. It will largely depend on economic conditions subsequent to the war as to where and how easily labor may be secured; and as the industry does not depend upon climatic conditions nor natural forces such as water-power, etc., factories may be established wherever there is an aggregation of people willing to work for comparatively small wages. It would be advisable to start small factories, without regard to immediate financial results, merely for the sake of teaching children — especially the girls — the art of weaving rugs. The same thing might be done in schools, just as they teach embroidering, knitting, etc., to the girls. This would serve a double purpose: it would in the first place spread the art of weaving among the people and increase the number of weavers, and secondly, it would give them a profitable pastime at home. Most of the rugs sold are made in private homes; comparatively few factories have been established owing to the difficulty of securing weavers; it is mostly housewives and girls that weave rugs at home whenever they get the time outside of their domestic work.

The next point in connection with labor is the necessity of having skilled artisans to teach weaving. If none exist among the natives, recourse must be had to neighboring rug weaving countries like Persia or the Caucasus. It is probable that the Smyrna district, where the deportations were not so radical, may furnish the desired skilled labor.

Wool.

Another difficulty to be anticipated is the supply of wool. Turkey has been a wool producing country; it has not only had enough wool for her own local needs but has exported large quantities of it to foreign countries. But owing to the war, the number of sheep has been greatly reduced, and it is probable that the need of wool in other lines may be so urgent that little may be allotted

for use in the industry of rug weaving. This is a problem whose solution will also largely depend upon the situation existing after the war.

Another important question in connection with wool, is the spinning of yarns. It is very essential to discard primitive methods and introduce machinery so as to render the yarns uniform and also save labor.

Dyeing.

Hitherto, the dyeing of yarns for use in rug weaving has been done generally according to antiquated native ways. It is exceedingly important to insure uniform dyeing, and to that end chemists should be sent from America and plants be established for the exclusive purpose of dyeing yarns according to the latest scientific methods.

Designs.

Should be furnished to harmonize with the requirements of modern decorative art in the consuming countries. The services of competent artists should therefore be availed of in this respect. The question of *Transportation* does not play an important part, as the distances between rug weaving centres and sea-ports are not very great, in normal times the charges arising in that connection do not materially affect the cost price. The most inland rug weaving districts in Asia Minor may be reached in a few days from Black Sea or Mediterranean ports by existing transportation facilities.

In conclusion, there is but little doubt that if the suggestions above outlined are followed, and the yarn-spinning, dyeïng and designing processes are specialized and centralized, great savings can be had, and that the industry will prosper more than it has ever done in the past.

STATUS OF WOMEN.

Mary Caroline Holmes.

Even a casual survey of conditions in Turkey will reveal the startling fact that the remaining inhabitants are largely women and children. All men from seventeen to sixty years of age have been compelled to perform military service. Just how many are left will not be known until the war is over. The Armenian men have been massacred by the tens of thousands, also the Greeks. The Syrians have not been massacred, but thousands have died from starvation or have been deported and executed. Hence the women are out of all proportion to the men.

The seriousness of the situation cannot be estimated unless the facts concerning the position of women under Ottoman rule are known. Nor can one who has not lived among them realize the utter hopelessness with which they must face the future as wage earners. All women in Turkey have lived lives more or less secluded, the Christians less so than the Moslem and Druze.

These women, having had no training, or very little, to fit them for self support, are suddenly deprived of their male wage earners, their property, if they had any, all gone for necessities, every industry of the country either paralyzed or wiped out, and no earthly help other than very slight relief from a foreign country. Many have starved, others will starve or perish from cold before material help can get in from the outside. But those who remain should have immediate and proper care, once the door is opened into that stricken land.

In considering the woman question there must be a sharp division into two groups: — Mohammedan and Christian. In the former may be included the Druze and Nuseireh women among whom practically the same social customs and restrictions obtain.

Mohammedan Women.

Two elements among Mohammedans not found among Christians are, *Marriage Customs* with plurality of wives and easy divorce, and *Seclusion of Women* behind the veil and lattice. While

polygamy is dying out and the better educated class have abandoned divorce for the most part, the fact remains that both are allowed by Mohammedan Law. Thus it is that the foundations upon which the home and family life rest are insecure. If a man divorces his wife after she has borne him a son, which he can do in a fit of temper, the mother loses her right to the up-bringing of her child who remains with the father. If the child be a daughter she is usually cast aside with her mother.

A Moslem man may marry a Christian or a Jewish woman, but the same privilege is denied a Moslem woman. If a Christian or Jewish woman adopts Islam, her husband must either divorce her or become a convert himself.

Happily the Christian ideal of marriage has become that of the enlightened and educated. As an illustration, a government official, a Turk, was sent to a post in Syria where the Mohammedans were non-polygamus and scorned divorce. He had two wives, and so persistent were his co-religionists in urging monogamy upon him that he put away one of the women, and knew, as he said, what a happy home meant for the first time.

Contrary to the western notion, the veiling of women does not entail hardship. Rather it is a protection, and it is a question whether the abandonment of the privacy of the harem would work for good or ill. At first there would unquestionably result license and evil, both of which would probably be corrected in time. Most of the Moslem women known to the writer reject the idea of unveiling in public as they do the admission of men outside their family circle into their homes. Still, the women of the secret Christians among the Moslems, of whom there is a steadily growing number, do not veil in their religious assemblies nor among their immediate " Brethren " as they call one another.

Property Rights.

A Mohammedan woman, whether married or single, may hold property in her own right, and if of age, may dispose of it as she will, not even her husband or father may interfere. She may if she choose lend to either of them, and if they fail to pay it back, may sue in her own name or may appoint an attorney to receive it for her.

She is not bound to contribute anything towards the household expense. The income from her property she may collect herself and need not contribute towards her own personal expenses. The property rights of men and women are absolutely distinct.

In the matter of inheritance, "two women make one man," the male receiving two portions to the female one. The Moslem woman is far from being the equal of her spouse. The Koran says, "Men shall have the pre-eminence above Women, because of all the advantages wherein God hath caused the one of them to excel the other; they are superior in understanding and strength, and enjoy privileges and dignities in Church and State, go to war in defence of God's true religion, and claim a double share of any inheritance." Couple with this the almost unlimited power of divorce on the part of the husband, a separation of property was necessary to protect the woman.

A husband is permitted by the Koran to chastise his wife with the rod if he so wills. He may forbid her to leave the house excepting to visit her parents once a week. He may prevent her from singing songs and compel her to say her prayers even if he has to beat her to that end.

The same laws relating to inheritance and property rights obtain among Christian women.

I consider the problem of the future of Moslem women and girls the most serious confronting us. Their religious prejudices may prevent the gathering of their orphans (for without doubt there are thousands of Moslem orphans) into orphanages directed by Christians, while they have no women capable of directing such gigantic tasks. And yet, I believe this difficulty may be overcome by sympathetic, liberal minded persons, as there is such dire necessity and want taken together with the fact that but few male wage earners are left.

As to *Occupations,* Moslem women have none outside their homes. They cultivate the silk worms, distill orange and rose water for their own consumption, crochet, some of them with rare skill, and embroider to a certain extent, in addition to keeping their houses neat and tidy, all of which may have a commercial value if properly directed, excepting the latter.

It will be possible to add to the home industries mentioned, certain others such as the making of handkerchiefs for export, as well

as fine underwear for women, the knitting of sweaters and stockings, preserving and drying of fruits and the making of tomato conserve at which they are adepts.

Christian Women.

The status of Christian women of the various sects has been quite different to that of the Mohammedans. Only in large cities where there are more Mohammedans than Christians have they been constrained to veil in the streets. In their homes, they are as free as any European. Divorce is almost unknown and exceedingly difficult to obtain, as marriage is considered a sacrament. All questions concerning domestic relations and inheritance are in the hands of the ecclesiastics. It should be stated that perhaps in no country in the world is morality so universal as in Turkey, especially among the Christians.

Occupations.

While not many occupations have been open to women, there have been many wage earners as teachers, sewing women, domestics, workers in silk mills, a very few as clerks in shops and of late, nursing as a profession has been made possible, by the fine training school for nurses in connection with the Syrian Protestant College in Beyrout. In their homes they roll cigarettes, make needle work edges on veils, assist in the cultivation of the soil to a limited extent, care for the silk worms and make fine crocheted lace. An inspector sent by the United States Government to look into the lace making asserted that Syria was rapidly taking first place in the production of the best Irish lace, and that it was likely to become the world centre of that industry.

There is no reason why, in the readjustment of things, any of the professions open to European women should not be to these eastern women. The Syrian women in particular, who have emigrated to the two Americas, have shown marked business ability, and many have acquired fortunes.

Possible Industries.

There may and should be a revival of rug making — an occupation wherein both Moslem and Christian women may have a share. The famous vegetable dyes made from beets, saffron, onions, pome-

granate rinds and other vegetables, boiled over slow charcoal fires may be made again a profitable industry. Due consideration as to sanitation, light, etc., should have careful attention and supervision in home work. The old embroidery, alike on both sides, and as old as the Bible, should not be allowed to die out, but preserved as an inheritance of the race.

The making of jams and jellies in a land of fruits may become a great industry. The delicious orange petal preserve, unknown outside of Syria, would command high prices in European and American markets, and furnish employment for many a woman and girl who would need no instruction to fit her for her task, other than the standardization of her product.

Flower culture has scarcely been touched in Turkey. In the parts of the country where frost never comes, the growing of violets, roses, tuberoses, etc., might be profitable. Of course here instruction would be needed. Further, I would like to see dairies attempted with due care to the breed of the stock, feed and cleanliness. Bottled milk and cream and butter making, largely the work of women in this country, might be attempted with good results there. There is also poultry raising, bee keeping, bread and cake making together with *lebin* — the curds everyone eats there — for the market.

My experience leads me to say that whatever American women can do with their hands assisted by trained minds, the women of Turkey may also do if they have proper help and supervision until they thoroughly learn their trades.

Heretofore the better class of Christian girls have found but one or two avenues open to them if they have had to be self-supporting — that of teaching primarily. A very few have learned to play the piano indifferently, but almost none sufficiently well to be able to teach others. There is dress making which is as old as woman, but owing to no regular instruction, what knowledge any one has, was " picked up " rather than a result of teaching. Hence none are proficient.

The needs of the aged women of both the Moslem and Christian should have careful consideration and their maintenance assured, either in Homes or by means of a pension sufficiently large to provide for their necessities. The blind will be doubly helpless also, and should have a part in any general rehabilitation plans. A school

for them with an up-to-date equipment for industrial training for both males and females should be included in any scheme of preparation for self support. The lack of doctors, medicine and food will result in the loss of sight to many who already were suffering from trachoma, ophthalmia and other diseases of the eye.

Education.

The status of woman prior to the war, was not such as to prepare her for the important part she will be called upon to take in the reconstruction of things social and economic within the bounds of the Turkish Empire, when peace shall have been declared. The high degree of illiteracy will be lessened somewhat through the disappearance of the older women among the Mohammedans. The younger Moslem girls were being sent to mission schools in many places, because the educated Moslem men would no longer take ignorant brides. As one mother expressed it, " My daughter has to be able to speak English or French or both, as well as Arabic, else I cannot marry her off."

Among Christian women the percentage of literates is far higher than among Moslems. For two generations the majority of Christian women have received at least a common school education at the various mission schools, while the better class have largely attended boarding schools.

The Ottoman government has provided no general educational system. Some thirty years ago, realizing that the Christian girls were outstripping theirs through attendance at mission schools, primary schools were opened for Moslem girls in some of the larger towns. The object was to teach them to read the Arabic that they might be indoctrinated in the Koran, which policy is pursued today. Little else is taught, not even penmanship sufficiently well to mention.

No provision for schooling non-Moslem girls has ever been made. Following the lead of the missionaries, the more powerful of the Christian sects have in recent years established schools in some of the larger cities, and of marked excellence. But nowhere in Turkey are there sufficient schools to adequately deal with the educational problem. Excepting in Constantinople, there is no institution which may be properly termed a college to which a girl may be sent. The nearest approach to it in Syria, is the American

School for Girls in Beyrout, the leading and oldest school, for girls. It should add a collegiate department without delay, that it be prepared to cope with the new order of things after the war is over, or the land pass into the hands of the Allies.

All educational work in Turkey, especially that of female education, has failed to look ahead with sufficient breadth of vision to the problem of self support. Most, indeed all mission boarding schools teach bits of house work and sewing. That is, the students sweep and dust, and in certain schools wipe up the stone floors, and clean the lamps, etc. In others a minimum of cooking is taught, but no attempt has been made to teach domestic *science* from the foundation up.

The instruction of the future should include industrial training of every sort after approved modern methods. The old native industries as outlined above should not be neglected, but modernized and improved and put on a sound basis. Silk culture, almost wholly in the hands of the women, should be directed by experts from Europe. There have been enormous losses in recent years from a disease called the " yellows " which attacked the worms, no remedy for which having been sought by the government, not even when the mulberry trees were rooted out and citrus fruits planted in their places.

Mohammedan girls are debarred from occupations outside their homes, as has been said. Christian girls do not have this handicap. Therefore, their training should be along similar lines to those of European or American girls. In Egypt, there are some Syrian young women who have proven that they are second to none in mental acumen. Two sisters may be cited, one a skillful physician, a graduate of Edinburgh University, who has a large and lucrative practice in Cairo. The other studied law at the University of Paris, and is the only Eastern woman to be graduated in that subject from that institution.

The future education of Moslem girls must be far wider than ever before. Not only should they be given a good liberal education, but special regard should be given to the teaching of occupations which may be carried on in their own homes. Every sort of hand craft should be placed within their reach, such as fine sewing, dress making, scientific cooking together with food values and hygiene, laundry, preserving and drying of fruits and even garden-

ing, which will fall to their lot for a time, at least, until the little boys will have grown somewhat larger. The best and brightest should have training for teachers, and the best training. I would also include music, stenography and typewriting and the keeping of accounts. The future is luminous with possibilities and never again should it be possible for these women of the harem to be helpless as they are today when sudden stress comes upon them.

Orphans.

As to the orphans, they must be gathered into communities, not great institutions. The cottage system should be adopted, with house mothers and educational facilities as good and broad and thorough as it is possible to make them, special attention being given to the natural bent of individuals.

It may be necessary to separate the Moslem girls from the Christians. Yet, I believe even this difficulty may be arranged, if there be observed due regard for religious prejudices.

It should be noted that the Moslem women have felt the throb of activity, which permeates the West. In the large centres, like Constantinople and Beyrout, they are gathering a few of the children bereft of parents into institutions and caring for them as well as their limited experience will allow. With all their good will they can only touch the fringes of the orphan problem. Undoubtedly only Mohammedan orphans are rescued, and the most desperate cases at that.

In a peculiar sense, the women and orphans of Turkey are the wards of America. Those who survive massacre and famine will have been saved because America took thought for them and sent and succored them. We dare not withdraw our hand until we have remade their lives with schooling and industries.

FINANCES IN THE TURKISH EMPIRE.

PART ONE.

MEMORANDUM ON THE POLITICAL AND ADMINISTRATIVE REORGANIZATION OF TURKEY.

W. F. WILLOUGHBY.

General Remarks. — Due to lack of time and information it is impossible in the present memorandum to attempt anything approaching an exhaustive statement of the steps that will have to be taken for the political and administrative reorganization of Turkey should that problem be presented to the Allies following the conclusion of the present war. All that it has been possible for the author to do in this memorandum is to draw upon his previous study of the problem of reorganizing the political and administrative systems of backward countries, such as Cuba, the Philippines, Porto Rico and China, and his practical experience in reorganizing the political institutions of the last two countries named, and to seek to apply the knowledge and experience thus gained to the conditions obtaining in Turkey.

This memorandum, therefore, seeks rather to state the problems presented and the general nature of the steps that will have to be taken for their solution, rather than to attempt to set forth specifically the action to be taken in each case. Such specific recommendations, to be of value, would have to be based upon an intimate knowledge of conditions, which knowledge could only be obtained after an exhaustive study in the country itself.

In writing this memorandum the position has been taken that the Allies will have a free hand to take the action that to them seems wise, and that in reaching a decision they will be free from political consideration of an international character. It need hardly be said that it is not likely that these conditions will actually obtain. Especially will weight have to be given to considerations of a purely

political character as affecting the several nations of Europe. Nevertheless, it has been necessary in writing this memorandum to proceed upon the basis that the hands of the Allies will be free.

For purposes of clearness, the attempt will be made to consider the steps to be taken one by one in the general order in which they will logically present themselves.

Statement of Principles. — Manifestly the first step cannot be taken by a number of nations seeking to act in concert for the reorganization of the political and administrative institutions of another country, until such nations have themselves reached an agreement regarding the general policies to be pursued by them, and the general ends which they have in view. This is a matter of supreme importance, since unless the nations do come to a very definite agreement before any action is taken, difficulties in the actual prosecution of the work will be sure to arise and the success of the enterprise will be seriously jeopardized.

Not only is it necessary that the Allies, in seeking to reorganize the government and administration of Turkey, should come to an agreement, but this agreement should be set forth in writing in a formal document. By this is not meant that the attempt should be made to set forth in any detail the character of the action to be taken, but merely to make known the fundamental purpose or purposes that the Allies have in mind; for example, whether the object of intervention is to take over and administer the affairs of Turkey permanently or merely to intervene for the purpose of reorganizing the government and system of administration of that empire with a view to turning over the control and administration of such reorganized system to the Turkish authorities at the earliest practicable date.

The formulation and publication of such a document is desirable, not merely in order that certainty may exist on the part of the cooperating Allies themselves, regarding their fundamental purpose, but that the inhabitants of Turkey and the world at large may have full knowledge regarding the purpose and character of the proposed intervention. In making this suggestion the writer has in mind the preparation and publication of a statement analogous to the famous letter of instructions drafted by Secretary Root and given by President McKinley to the Philippine Commission for the purpose of informing it and the inhabitants of the Philippines the

end that the United States had in view in organizing a system of government and administration for those Islands.

The most noteworthy feature of this letter of instructions was the definite statement by the United States that its fundamental policy was to organize and conduct a government with sole reference to the welfare of the inhabitants of the Islands; that every effort would be made to develop the principles of local and self-government; that the largest possible use would be made of native Filipinos in the practical administration of affairs; and that, as rapidly as circumstances permitted, the control of their government would be turned over to them. In a word, the Philippine Commission was instructed that their functions were substantially those of a trustee, that they should exercise their powers with a view to the welfare of the people on whose account their trust was exercised, and that they should seek to hasten in every possible way the time when the trusteeship might be discontinued and control surrendered to the people governed.

This letter of instruction constitutes, in my opinion, a model to be followed in all cases where one nation or a number of nations seek to intervene and control the political affairs of another.

To recapitulate, it is my opinion that the Allies, prior to intervening, should draw up a declaration setting forth the principles that they have in view in making such intervention, and that these principles should at least include the following:

(1) That the intervention is had for the purpose of establishing in Turkey a stable government based upon modern principles;

(2) That as soon as this is accomplished, the direction of affairs will be surrendered to the Ottoman people;

(3) That the government will be established and administered with this definite end in view; and

(4) That to this end every effort will be made to train Ottoman subjects to fill important positions, and as far as possible use will be made of native officials in conducting the affairs of the provisional government.

In other words, this declaration of principles should make clear that the intervention will take substantially the same form as that of the United States in Cuba.

Form of Government. — Having determined the purpose of the intervention, the next step to be decided will be the form of gov-

ernment that will be established to administer the affairs during the period of trusteeship. In my opinion, the government to be established should be closely analogous to that first established by the United States Government for the administration of the affairs of the Philippines; that, namely, where all powers, legislative, executive and judicial, are vested in the first place in the hands of a commission, the members of which, as individuals, will be in charge of, and directly responsible for, distinct branches of administration, while collectively they will sit as a board for the exercise of legislative powers. The members of this commission will be selected by the nations participating in the intervention. Under this system administrative responsibility will be definitely located, while general direction, supervision and overhead control will be exercised by the commission as a whole.

Composition of the Commission. — This commission, it is suggested, should be composed of a chairman, who should have the designation of governor-general, and exercise the powers of chief executive, and of members who should hold ministerial portfolios. Following are the administrative departments that should be provided for:

1. Department of State,
2. Department of the Treasury,
3. Comptroller and Auditor-General,
4. Department of Justice,
5. Department of Public Works,
6. Department of Public Domain and Communications,
7. Department of Education,
8. Department of Public Health.

This will give a total membership, including the governor-general, who should act as the presiding officer of the commission, of nine.

The Department of State, in addition to having charge of the duties usually pertaining to such an office, should also have immediate charge of all affairs of a political character having to do with the organization and administration of provincial and local government.

The Department of the Treasury should have charge of the collection, custody, and distribution of all public funds, the supervision of the currency and banking systems of the country, the administration of the public debt, the supervision and control over

provincial and local governments in respect to their financial affairs, and generally all matters having to do with public finance. Especially should it be the duty of this department to prescribe a uniform system of accounts and reports and financial procedure generally for the provinces and local governments, and thereafter to exercise such control over the conduct of financial affairs by these bodies as is necessary to insure that the provisions of the systems established are properly enforced.

The comptroller and auditor-general should have the official control of treasury receipts and issues, and the auditing of all public accounts. It should be his function also to prepare the annual budget for consideration by the commission as a whole.

The Department of Justice should have direct responsibility for the reorganization of the system of courts and judicial administration generally of the country, and of supervising the work of compiling and codifying the laws of the land.

The Department of Public Works should be essentially an engineering department with the duty of doing all the public work, such as the construction of roads and bridges, the making of harbor improvements, erection of buildings, etc., which is undertaken by the government for the industrial development of the country.

The Department of Public Domain and Communications should have charge of the administration of the revenue producing properties and enterprises of the government, such as the landed domain proper, mines, the salt monopoly, the tobacco monopoly, and government railways, telegraphs, telephones, and the like. It should also have the consideration in the first place of all applications for franchises, privileges and concessions, and the supervision over the enforcement of the provisions of such grants as may be made. All such grants should be made by the commission as a body.

The duties of the two remaining departments, those of Education and Public Health, are sufficiently described by their titles.

Under this scheme of government each of the members of the commission will be responsible, not only for the administration of his department, but for formulating and bringing before the commission as a whole those programs of reform necessary in order to put the administration of public affairs in Turkey upon a sound basis.

The Problem of Control. — In organizing any scheme of government or administration, it is of the utmost importance that pro-

vision shall be made of means by which a rigid supervision and control may be exercised over the officers in respect to the manner in which they perform their duties. The most effective means by which such control can be exercised is through the establishment of a scientific system of financial records, accounts and reports. To this end great care should be taken that there shall be established a system of accounts and reports of such a character as will permit of current knowledge being available regarding how affairs are being conducted. This is necessary, not only to insure efficient administration, but in order that the people of Turkey and the world at large may have accurate and detailed knowledge regarding the manner in which the government is performing its functions. This matter of publicity in respect to how affairs are being conducted is one upon which I would lay great stress. It would be my strong recommendation that there should be established an official gazette in which should be published, not only all laws, ordinances, franchises, executive and administrative orders and regulations, but full abstracts of administrative reports and financial data. Such a publication furnishes, not only the most effective means by which all persons interested may keep themselves informed regarding the conduct of affairs, but a powerful instrument of public education. If the people of Turkey are to be contented with the administration of their affairs by an outside authority, they should have the fullest means of knowing from day to day how affairs are being conducted by such authority. Unless there is this full publicity in respect to all official acts, unfounded rumors will be rife regarding misconduct and the population of Turkey can never be persuaded that affairs are being honestly conducted and with a view to their welfare.

Relation of Government to Diplomatic Representatives of Powers Intervening.—One of the most important and delicate questions that will be presented in the organization of a provisional government for Turkey will be the nature of the relations that will exist between such government and the diplomatic representatives, or the home authorities of the governments participating. In my opinion, it is of the utmost importance that the provisional government should be made, as far as possible, independent of such representatives or authorities. This is important even where intervention is had by a single government. It is doubly so where the intervention is the act of a number of cooperating powers. It is well known that there have been few, if any, successes in the past of

joint intervention by a number of nations for the control of the affairs of another nation. Lord Cromar, in his work on "Modern Egypt" (Vol. 2, pp. 303, 441) has these very pertinent observations to make relative to the difficulties experienced where such joint control by a number of governments over that of another country is attempted:

The experiment of administrative internationalism has probably been tried in the No Man's Land of which this history treats to a greater extent than in any other country. The result cannot be said to be encouraging to those who believe in the efficacy of international action in administrative matters. What has been proved is that international institutions possess admirable negative qualities. They are formidable checks to all actions, and the reason why they are so is that, when any action is proposed, objections of one sort or another generally occur to some member of the international body. Any action often involves a presumed advantage accorded to some rival nation, and it is a principle of internationalism, which is scornfully rejected in theory and but too often recognized as a guide for practical action, that it is better to do nothing, even though evil may ensue, than to allow good to be done at the expense of furthering the interests, or of exalting the reputation of an international rival. For all purposes of action, therefore, administrative internationalism may be said to tend towards the creation of administrative impotence.

* * * *

The internationalism which I wish to condemn is, therefore, confined to what may be termed political internationalism, that is to say, the system which admits of the employment of political agents, who, acting under whatever instructions they may receive from their several Foreign Offices, are prone to introduce into the discussion of some purely local question, considerations based on the friendliness or hostility, in other parts of the world, of their countries of origin. Political passions are — or at any moment may become — too strong to allow of an international system of this latter type working smoothly.

In the foregoing Lord Cromar has stated the fundamental reason why joint intervention in the past has almost always proven a failure, or at least has failed to work smoothly. This reason consists in the attempt on the part of the cooperating governments to control currently the operations of the government set up. Where this is done, the real source of authority lies in the diplomatic corps, or in the home governments. So long as the real source of authority has this location, it is impossible to eliminate political consid-

erations as determining factors. It is, in my opinion, therefore, of vital importance that the government to be established should, as far as possible, have autonomous powers, and that it should not be compelled to be constantly securing instructions from their home governments and diplomatic representatives, and that the right of appeal from their action to the home government should be restricted within as narrow limits as possible. The fact that the governments set up for the administration of the affairs of the Philippines and Porto Rico were given autonomous powers of the broadest character is responsible more than any other feature for the success achieved by such governments.

Administrative Services. — It has been stated that the government to be established should have as one of its main ends the political education of the people and their training for the exercise of political administrative authority, and that as large use should be made of the native peoples as officials as circumstances will permit. To achieve this end, it is desirable that every effort should be made to make of all branches of the government service ones offering a permanent career for both their directing and subordinate personnel. To do this, the positions in each service should be carefully classified in a hierarchical system analogous to that obtaining in the military and naval establishments of all countries; appointments, as far as possible, should be made in the first instances to subordinate positions; higher positions should be filled chiefly through promotions; merit should be made the controlling factor in determining appointments and promotions; salaries should be adequate and promptly paid; and special provision should be made for the instruction and training of employees so as to qualify them for appointment to superior positions. It is quite possible that it would be desirable to establish a civil academy analogous to our military and naval academies, having for its function the education of young men to enter the more important special services of the government.

The definite establishment of conditions where the government services offer a permanent career will not only do more than anything else towards the securing of efficiency in administration, but will contribute more than anything else to the elimination of corrupt practices, and to the giving to the country of a corps of competent and honest officials which must be created if the conduct of affairs is ever to be surrendered by the provisional government into

the hands of the people themselves. It will also contribute powerfully to securing the acquiescence of the population of Turkey in the administration of their affairs by an outside authority. No one can question the fine administration that Sir Robert Hart gave to the foreign customs service of China. His work, however, in my opinion, is open to the serious criticism that he did not sufficiently seek to train a corps of native officials into whose hands the control of the service might ultimately be surrendered. The result is that after over fifty years of administration, the affairs of that service are still in foreign hands. This is a condition of affairs which I think should be avoided if it is possible to do so.

Provincial and Local Governments. — It has been stated that all authority in the first instance should be vested in the central government. That government should at once proceed, however, to the devising of systems of government for the administration of provincial and local affairs. The most important point to be considered in organizing such governments is that they should be deemed to be but administrative divisions of the central government; in other words, the local agencies through which the central government administers those affairs which pertain to particular localities, rather than the country as a whole. Though treated as administrative divisions of the central government they should, nevertheless, be given a large degree of autonomy. Especially should their financial systems be carefully segregated from that of the central government, so that each government will have its own revenue and expenditure system. The duty of the central government, in other words, should be that of devising a scheme of government to be established, of prescribing a system of accounts and reports to be kept and rendered by such governments, and of subsequently exercising such supervision and control over their affairs as will insure that such affairs are being reasonably well administered. This means that the central government will have to draft and promulgate organic laws for the government and administration of provinicial and local bodies, that it will prescribe the system of accounts to be kept by such bodies, and the reports that are to be rendered by them to the central government, that it shall provide for an inspection system that will enable it to assure itself that affairs are being conducted in accordance with law and in an honest and reasonably efficient manner, and that it shall have power, where affairs are not so conducted, to intervene.

Constabulary. — From a consideration of the form of government that should be established for the administration of the public affairs of Turkey and the general principles by which it should be guided, we now turn to a consideration of the more specific action that should be taken by such government in the performance of its functions.

The first step to be taken in this direction consists in taking the action that is required in order to secure internal order. To this end there should at once be created a national constabulary to which should be entrusted the duty of maintaining order, and of discharging all of the duties pertaining to a police force. I believe that during the period while affairs are being administered by the provisional government, the army and navy should be disbanded and no provision made for such forces. I believe, furthermore, that no provision should be made for local police forces, except possibly where forces are established with very restricted and special powers. It has been the experience in the Philippines, Porto Rico, and elsewhere that it is exceedingly difficult, if not impossible, to have an efficient and honest administration of police affairs where such administration is under the control of local authorities. In attempting the reorganization of the administrative affairs of Turkey, it is essential that at the outset at least all authority should be vested in a central government, and, as far as possible, exercised by direct agents of such government. The problem of maintaining order, moreover, requires that it shall be possible rapidly to concentrate forces where trouble is apprehended or actually breaks out.

Experience in the Philippines, in Porto Rico, and in other countries, has shown that it is possible to organize a central constabulary, composed almost wholly of natives of the country, which will perform its duties with a high degree of efficiency. In Porto Rico where I served as Treasurer, and subsequently as Secretary of State of the Island, we had an insular constabulary of about 800 men, all of whom, with the exception of the chief and assistant chief of the force, were native Porto Ricans. The Island was divided into police districts with an officer in charge of each. The force was organized on a military plan in the sense that military titles were employed, and some training was given to the members of the force to act in military formation where conditions required. By adopting and enforcing rigidly the merit system in respect to promotions, a high degree of *esprit de corps* was developed, and

little difficulty was found in securing and retaining a competent personnel.

The constabulary when organized should be attached to and under the superior direction of the governor-general, and be the chief instrument through which he will perform his function of seeing that the laws are duly enforced. Incidentally, the disbanding of the military and naval forces will afford a great relief to the budget, and thus facilitate greatly the putting of the financial affairs of the government upon a sound basis.

Judicial System. — A second fundamental step to be taken will be the organization of a system of courts throughout the country and the adoption of a revised code of judicial procedure. Next to maintaining order is the necessity for providing means by which prompt justice can be administered, laws enforced, and offenders against the law prosecuted. In establishing such a system especial effort should be made to make the lower or trial courts efficient bodies. There is a strong tendency to make such courts relatively weak bodies, and to depend upon superior courts to correct their errors. The aim should be to give to such courts such a character and strength as will make their decision, for the most part, final, and to limit the right of appeal as far as possible.

Codification of Public Law. — Immediate steps should be taken to compile or codify the laws to be enforced in such courts. The codification of private law in any country is a matter of extreme difficulty, and would be still more difficult in a country such as Turkey. Steps should, however, at once be taken to codify all public law, administrative law, and laws governing judicial procedure.

Financial Reform. — It is hardly necessary to state that one of the essential steps to be taken by the provisional government will be that of the thorough reform of the finances of the country. The accomplishment of this reform will require action in a large number of directions. In the following paragraphs I cannot attempt to do more than point out some of the more important steps to be taken and to indicate in a general way their nature.

The establishment of a proper budgetary system constitutes the starting point for any proper system of financial administration. It is fortunate that Turkey has apparently had in the past a fairly well devised budgetary system, though it is probable that the provisions of this system were never consistently carried out in

practice. It is a great advantage, however, that the country should at least have knowledge of the requirements of such a system and some experience in its application. Under this system provision should be made that all revenues of every kind, whether derived from taxes, the public domain, or government monopolies, should be covered into the treasury to the end that it may be possible to obtain a consolidated, classified statement of the total revenues of the country. No expenditures should be made except in pursuance of appropriations formally made by the proper appropriating authority, which, in the case of the provisional government, would be the commission. This does not mean that certain services of the government, such as the salt and tobacco monopolies and the railway administration, might not have substantial financial autonomy. If desired, appropriations could be made in bulk for the use of these services, which would afterwards be more specifically allotted by the governing authorities of such services.

Next, provision should be made for a scheme of accounts that will require proper record of all financial transactions. As far as possible, this system of accounts should, as regards its main principles at least, be uniform for all branches of the government. Provision should also be made for the rendition of periodical reports by accounting officers. It is hardly necessary to say that the work of installing a proper system of accounts, and providing for a scheme of financial reports, which will reduce to a minimum opportunities for fraud and mismanagement and insure a due accounting for all receipts and disbursements, will be an undertaking of great magnitude. Primarily the responsibility for devising such a system should fall upon the offices of comptroller and auditor-general. My experience is that it is quite possible to establish a system which will accomplish these ends in a country which in the past has been notorious for official corruption.

Another feature of financial reform will consist in the revision of the system of taxes now prevailing, and in the organization and procedure employed in administering such system. From such study as I have been able to give to the subject, I am of the opinion that the most important work to be done in this field will consist in the thorough revision of the present professional taxes and tithes. In respect to the former, I am inclined to think that the establishment of a professional and industrial license tax, properly graded, would be the direction that the reform would take. In

respect to the latter, I believe that improvement will lie in the direction of the development of a system of land taxes; that is, one under which assessment is made of the value of all land and a tax imposed in accordance with such valuation. When I was Treasurer of Porto Rico the task fell to me of revising the land tax system there prevailing, and of devising a system for the assessment of lands and the collection of the tax. I believe that a properly devised land tax should be made the basis of the revenue system for local and, possibly, provincial governments.

Another great work to be accomplished will be that of readjusting all public obligations. The national debt of Turkey at the present time consists of a funded debt and of a large outstanding floating or unfunded debt. If feasible, it would be desirable to have the funded debt refunded, so that it would be replaced by a single issue of bonds bearing a lower rate of interest and secured by the general credit of the government, instead of specially pledged revenue.

It is especially important that the floating debt of the government should be adjusted at the earliest practicable date. In Porto Rico we met this problem, which was a serious one, by providing for the careful examination of all outstanding claims against the government and of issuing in payment thereof certificates of indebtedness, bearing a low rate of interest, which interest, however, was not due or payable until the certificate itself was taken up for payment. Provision was at the same time made for the calling in and cancelling of these certificates as rapidly as the financial resources of the government would permit.

I am inclined to think that somewhat the same method might be employed in settling the floating debt of Turkey.

Currency and Banking Reform. — It will be exceedingly difficult, if not impossible, to effect a thorough-going financial reform in Turkey unless at the same time a similar reform is made in the currency and banking system of that country. It is impossible for me, with my limited knowledge, to indicate the character or direction that this reform should take.

Land Reform. — In like manner, it is difficult to organize or afterwards to administer any taxation system, or to secure any proper industrial development of the country unless the system of land tenures is such as to give security and certainty to the owner-

ship and possession of title to land. It is highly desirable, therefore, that the government should seek to devise and install a satisfactory system of land tenures and of the transfer of title to land. As far as it is feasible, provision should be made for a cadastral survey, and on the basis of this survey, the examination and registration of titles and boundaries. The principle to be followed should be that of the Torrens land registration system, under which official registry is made of the boundaries and titles to each piece of property, and title is thereafter transferred by notation on such official registry. I gather from my reading that Turkey now is in possession of some such system, though land is apparently held under a number of different kinds of titles. The work of reform would thus consist in the reduction of all titles, as far as may be, to one kind, and of perfecting the registration system now in existence.

Educational Reform. — I am making mention of this reform, not on account of its importance, since such importance is a matter of general recognition, but because I believe that it is so easy to make a mistake in respect to the character of the educational system that should be established. Both in Porto Rico and in the Philippines a great mistake was made in not giving due emphasis to technical, industrial and agricultural education. These countries, like Turkey, employ exceedingly primitive industrial and agricultural methods. One of the most important ends to be attained is to improve these methods. In large degree a population must secure its education in the largest sense through its activities. I would especially urge, therefore, that while provision, of course, should be made for elementary education, adequate provision at the same time be made for education of an intensely practical character, and that it should be devised with special reference to the development of the native industries of the country.

General Conclusions.— In bringing to a conclusion this memorandum there are certain general observations that I desire to make. The first is that, as far as it is possible, unity should be given to the provisional government by vesting all authority in the hands of a central commission, instead of leaving it distributed among a number of agencies. This will mean that the powers now possessed by such bodies as the Debt Commission or the services specially organized for the administration of the customs or the salt and tobacco monopolies, will be surrendered to the commission, and

that the duties formerly performed by them shall hereafter be performed by services regularly organized under the authority of the commission. At best the work of government and administration will be a difficult one, but it will be very much simplified if all authority could be vested in a single body, such as is here proposed.

Finally, I wish to say a few words regarding the feasibility of carrying out any such ambitious program as is above outlined. Personally I have no doubt of its feasibility, provided that the Allies themselves are convinced of the desirability of making the attempt. In reading accounts of conditions in Turkey written by persons personally familiar with such conditions, I am struck by the opinion frequently expressed of the capacity of the Turks, and the desire of many of them for good government. Thus Dr. James L. Barton, Secretary of the American Board, wrote, as a result of his long and intimate experience of Turkey and Turkish conditions, as follows:

Few countries in the world would respond so quickly to the influence of good government, and few people would so appreciatively welcome a firm and righteous administration as the people of Turkey.

Sir Edwin Pears, in his recent "Life of Abdul Hamid," has this to say:

The people over whom Abdul Hamid was called upon to reign are, generally speaking, easily governed. Three-fourths of them at least are agriculturists, who wish only to live in security.

If this is true, and it undoubtedly is, the great mass of the people would welcome a firm and honest administration of affairs that would give them security, especially if they knew that there was no intention permanently to treat their land as a subject country, and that full control over national affairs would be restored to the people at the earliest practicable date.

That the population of Turkey is keenly desirous of government, based upon and corresponding to those obtaining in other more progressive countries, is evidenced by the great enthusiasm with which the restoration of the constitution in 1908 was welcomed. Regarding this Sir Edwin Pears, in the volume already quoted from, states:

The proclamation of the Constitution, which was accompanied by notice that the Parliament would be summoned, had an electrical effect upon the population of the Empire. Constantinople went

delirious with joy. Moslems, Christians and Jews were exultant. Rich and poor; merchants and labourers; imams, priests and rabbis, joined hands in congratulating each other that the arbitrary power of Abdul Hamid had forever ceased. He had been like a dead weight on a powerful spring, which, when the weight was removed, at once acted powerfully. A wild cry of relief and delight burst from tens of thousands. Men and women alike shouted with joy. Even Turkish women, usually the most secluded and modest of their sex, shook hands and embraced their Christian sisters in the streets, and congratulated each other that liberty had dawned upon them.

PART TWO.

COMPILED DATA.

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The article on "Turkey" in The Encyclopedia Britannica, Eleventh Edition, gives an excellent treatment of the various phases of Finance. In-as-much-as this article is so easily accessible it is not deemed necessary to quote the various paragraphs in this compilation but merely to make reference to them under the different heads of this report.

(Editor.)

Budgetary System. — In form at least Turkey appears to have had, prior to the outbreak of the war, a well directed Budgetary System. By this is meant that the attempt is made to assemble in one document a detailed and classified statement of the anticipated revenues and expenditures to be authorized for the year to be financed. According to the Encyclopedia Britannica (see below) this budget is prepared in conformity with an excellent set of regulations sanctioned by imperial decree. It would appear moreover that the steps required for the revision and adoption of this budget are carefully provided for. Notwithstanding the fact that these provisions are undoubtedly not lived up to in practice and that actual conditions fall far short of legal provisions it is nevertheless a great advantage that Turkey should have knowledge of and in form at least make use of a scientific budget system.

Budget for 1912. — For information regarding the character of the budget see Empire Ottoman: Ministère des Finances. Loi promulguèe le Rebi-ul-Ewel 1330 (25 Fevrier 1327) portant fixation du Budget General de l'Exercise 1328 applicable jusqu'a la prochaine session de la Chamber des Deputes Constantinople. Impremerie de la Dette Publique Ottoman 1912.

This volume furnishes the best information in compact form regarding the revenue and expenditure system of the Turkish Empire.

An excellent analysis of the budget for 1910-1911 is given in the article "Turkey," Encyclopedia Britannica, Eleventh Edition.

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The budget for 1910-1911, as first placed before the Turkish parliament presents the following picture, from which it may be observed that the public debt absorbs 26 per cent. of the revenue, war service 38 per cent. and civil services 36 per cent.

EXPENDITURE.

	LT
Public debt	8,288,395
Civil list	443,880
Legislative corps	181,870
Finance	2,989,600
Accounts (central)	17,124
Customs	512,670
Posts and telegraphs	782,840
Cadastre	109,820
Grand vizierate	25,096
Council of state	33,050
Interior	1,157,230
Public security	400,405
Foreign affairs	213,400
War	8,280,453
Ordnance	356,440
Gendarmerie	1,694,778
Marine	1,000,328
Sheikh-ul-Islamat	483,341
Justice	751,580
Public instruction	744,086
Forests, mines and agriculture	370,520
Public works and commerce	883,160
Hejaz railway	550,180
Total	LT30,270,246

REVENUE.

(See above for details of general headings here given.)

	LT
"Direct contributions"	13,725,892
Stamps and registration duties	1,113,452
"Indirect contributions"	4,825,812
Monopolies	3,262,424
State undertakings, commercial and industrial	402,889
Domains	513,651
Tributes	871,316
Various receipts	1,132,896
Total	LT25,848,332
Deficit	LT4,421,914
	LT30,270,246

Budget for 1914-1915. — Following are brief comments upon the Budget for 1914-1915 as given in the British Diplomatic and Consular Reports: Annual Series 1914 No. 5374.

Turkish Budget. — The Budget for the current financial year 1330 (March, 1914, to February, 1915) was laid before the Chamber of Deputies on May 30. The receipts are estimated at

3,192,116,328 pias (about 29,000,000 £), and the expenditure at 3,400,761,987 pias (about 30,916,000 £).

The Minister of Finance, Djavid Bey, explains that the deficit of 2,000,000 *l* will be reduced when Turkey has been relieved of the share of the public debt falling to the ceded territories of European Turkey. The distribution of this share among the different Balkan States is to be decided by the International Financial Conference of Paris.

Moreover, the expenditure shown in this year's Budget includes an annuity of 1,300,000 *l*.T. for interest and sinking fund on Treasury bonds for the amount of 5,500,000 *l*.T. These bonds were issued for the purchase of the Dreadnaught " Sultan Osman," and will be redeemed by the end of the financial year 1333; and the credit required cannot be considered an ordinary item in the Budget.

A further sum of 383,000 *l*.T. required to pay off advances made by the Bagdad Railway Company will not figure at all in next year's Budget.

Djavid Bey concludes that when these three items are taken into consideration the deficit in the Budget will be seen to be more apparent than real.

He urges the Chamber nevertheless to the strictest spirit of economy in order to preserve the economic independence of the country, without which political independence cannot exist.

He justifies an optimistic view of the future by the steady progress shown in the yields of the revenue during the last five years and by the increased prosperity of the country which will result from the irrigation works already begun and from the construction of railways; and he looks forward to the conclusion of agreements with the Powers which will give Turkey her liberty of action from next September in raising fresh revenue. The fresh sources of revenue indicated are:

The increase of the import duty to 15 per cent. *ad valorem;* the creation of monopolies of petroleum, alcohol, matches, cigarette paper and playing cards; the imposition of a consumption tax on these articles as well as on sugar and colonial goods; and the application to foreign subjects in Turkey of the new income tax law. The total revenue to be derived from these sources is estimated at 3,000,000 *l*.

This fresh revenue will enable the Turkish Government to effect an annual guarantee of 2,500,000 *l*. to the service of fresh loans,

which will be required for military and naval equipment and for public works.

The ordinary budgets of the Ministries of War and Marine only provide for the pay, rations, uniforms, etc., of the army and navy. For the purchase of ships, guns, rifles, ammunition, etc., special financial arrangements will be made with the contracting firms, and security will be given out of the fresh revenue raised.

In the same way for public works, an expenditure of 50,000,000 *l.* will be necessary during the next 10 years on railways and bridges; and the loans required for this purpose will also be secured on this fresh revenue.

(Great Britain — Diplomatic and Consular Reports. Annual Series 1914, No. 5374. p. 9.)

Revenue System. — The sources of revenue of the Turkish government can best be determined by consulting the Budget to which reference has already been made.

The article on Turkey in the Encyclopedia Britannica, Eleventh Edition contains an excellent though brief account of the several taxes constituting the chief sources of revenue based on an analysis of the Budget for 1910-1911.

" The total revenues of the empire are estimated to produce LT25,848,332, and seeing the careful and moderate manner in which the estimates have been framed, this may be looked upon rather as a minimum than a maximum. The minister of finance stated in his budget speech to parliament, delivered on the 23rd of April, 1910, that the revenues for the year 1909-1910, which had been estimated to produce LT25,000,000, had as a matter of fact produced LT26,500,000.

Collection of Taxes. — " The Ottoman Empire possesses a very complete system of local self-government within certain limits. Every village or town district has a kind of mayor (mukhtar) appointed by election and approved by the official provincial authorities, and a " council of ancients " whose members are elected directly. The taxes are collected by means of the *mukhtars,* termed for this purpose *kabz-i-mal* (receiver of treasure), and under the supervision of gendarmes specially named, termed *tahsildar* (collectors). The official authorities provide lists of all the taxes to be collected to the *tahsildars,* who hand them, against formal receipt, to the *kabz-i-mals.* The latter are bound to pay in to the local authorities all sums collected in five days in town districts, and in fifteen days in villages, if under 1500 piastres; sums of 1500 piastres and over are paid in at once. The *tahsildars* check the accounts of the *kabz-i-mals,* and, if they discover peculation,

send them at once to be dealt with by the chief official authorities of the *caza* (department); all the electors of a *mukhtar* are, *ipso facto,* joint sureties for him. If the tax-payer declines to pay his due, he is brought before the proper authorities by the *tahsildar;* if he persists in his refusal, all his goods, except those indispensable for his dwelling and the pursuit of his trade, are sold by auction, without recourse to a judgment by tribunal. If he has no goods which may be seized, he may be summarily imprisoned for a term not exceeding 91 days; two imprisonments for the same debt are not permitted. The military exemption tax is not collected as above, but by the spiritual chiefs of the various religious communities. None of the above regulations apply to Constantinople, where no military exemption tax is imposed, and where separate official regulations for the collection of taxes are in force. The system of farming out the revenues is admitted, and is almost invariably followed in the case of the tithes. When this is done, the revenues to be farmed are put up to public auction and sold to the highest bidder, provided he can prove himself amply solvent and produce sufficient sureties. Elaborate regulations are in force for this method of collection to secure the state receiving its full due from the farmers, who, on the other hand, are entitled to full official assistance to enforce their rights.

"*Assessment of Taxes.* — For the purposes of assessment the taxes may be divided roughly into two classes: (1) variable taxes; (2) non-variable taxes. Under the first head would be included proportional taxes dependent upon the value of the property taxed; under the second, taxes whose amount does not depend upon that value. The first class contains such revenues as the *emlak verghi-si* (duty on realty), *'ashar* (tithes), *temettu* (professional tax), etc. In all such cases the taxable values are fixed by a commission of experts, sometimes chosen by the tax-payers themselves, sometimes by the official authorities; in all cases both tax-payers and authorities are represented on the commissions, whose decisions may be appealed against, in last resort, to the council of state at Constantinople, whose decision is final. Revenues composing the second class such as the *tapu* (registration tax) do not vary, unless by special decree, and the assessment is automatic.

"The systems, both of assessment and collection, were equitable and far from oppressive in theory. In practice they left almost everything to be desired. The officials, already too numerous and underpaid, frequently, as has been stated above, found such pay as they had far in arrear. They were therefore naturally open to bribery and corruption, with the result that, while the rich often got off almost scot free, the poor were unduly taxed, and often cruelly oppressed by the tax collectors and farmers of revenue. In all departments there ensued, thus, an alarming leakage of revenue,

amounting, it was credibly estimated, to quite 40 per cent. The new government energetically proceeded to remedy this state of affairs."

(Encyclopedia Britannica : Eleventh Edition: Article "Turkey."

The foregoing may be supplemented by the following notes regarding the more important taxes taken from various sources.

Customs. — Under the Capitulations it is incumbent upon the Ottoman Government to obtain the consent of the Powers, entitled to certain contractual privileges, before increased duties can be levied upon foreign goods imported into Turkey. The dues in question were originally, and by ancient custom, fixed at 3 per cent. This rate was confirmed in 1809 by the Treaty of the Dardanelles. By the Commercial Treaty of 1861 the Import duty was limited to 8 per cent. *ad valorem,* or a specific duty fixed by common consent, equivalent thereto. In 1883 this Treaty terminated, and duties were thenceforth levied on a basis of 8 per cent, ad valorem.

Various attempts have been made by the Ottoman Government to secure the adhesion of the Capitulatory Powers to the increase of this duty.

* * * * * * * *

When, however, in 1900, the Sublime Porte approached the foreign Representatives with a proposal to raise the customs duties from 8 per cent. to 11 per cent. *ad valorem,* pending the conclusion of new Commercial Treaties, Her Majesty's Government laid down certain conditions which would require to be met before they could in principle take the scheme into consideration.

(Great Britain: Foreign Office: Correspondence respecting the Increase of the Turkish Customs Duties. 1907. No. 98, p. 80.)

In our opinion, *the capital vice* of the uniform ad valorem tariff, as it exists in Turkey, is that the different industries which could be created in the country receive from it an absolutely insufficient protection, and are from the start condemned to failure . . .

" . . . The Ottoman government has attempted for a number of years to secure a revision of the commercial treaties. Germany has been the first of the great powers to sign a new treaty containing the substitution of specific for ad valorem duties . . . "

(Du Velay p. 673.)

The administration of the customs is vested in a service headed by a Director-General who acts under the orders of the Minister

of Finances. The chief officials of the Central Administration are appointed by the Director-General who submits his proposals to the Minister of Finances who communicates them to the Sublime Porte. Appointment takes place by Imperial Decree. The legal counsellor, the chiefs of the bureau of the Central Administration, and the controllers are named by the Minister of Finances on nomination of the Director-General. All other officials are appointed by the Director-General. Creation of new posts within the limits of the budget must be approved by the Minister of Finances. Officials having a salary of 500 p. or less are removable by the Director-General, others by the Minister of Finances.

Employes of the customs service are admitted by competitive examination. Age: 20-26.

Two classes:

1. The bureaus of general administration and of the customs;
2. Material services, i. e., coast-guards, etc.

Examinations for the first class comprise the following subjects:

1. Obligatory.

   Turkish, French, Arithmetic (the four rules, calculations of interest, discount, conversion of moneys, weights and measures, accounting), and geography.

2. Optional.

   Some other European language.

Those who pass the examination in (2) are given a preferred ranking. Maximum points for each subject, 12.

The examining committee is named by the General Administration.

The oral examinations in the languages are conducted by examiners named by the Director-General.

For promotion two points shall be considered:

1. The capacity and conduct of the employes.
2. Their age.

Promotion takes place on the report of the chief of the bureau.

Removal. — In case of complaint against an employe, there shall be an investigation, then, if necessary, suspension. Suspended employes shall be reported to the courts. In case condemnation by the court is of such a nature as to make reemployment impossible, his employment shall be revoked.

Employes of the Turkish customs are prohibited:

1. To ask for or accept gifts, tips, or presents from persons who do business with the Customs.
2. To publish their opinion in the press of the Administration of the Customs or of its employes.
3. To lend to their subordinates or borrow from them.
4. To assume a post outside of the Administration without the consent of the Director-General.

(Reglèment sur l'organization administrative de la Direction des Contributions Indirectes. 1909. Legislation Ottomane, 1912, pp. 470, 476.)

Bonded Warehouses. — For the last quarter of a century the establishment in Constantinople of a proper system of bonded warehouses has been urged by the British Chamber of Commerce.

It was made a principal condition in the negotiations for a new commercial treaty as far back as 1885.

The concession granted in 1890 for the construction of the Constantinople quays included the right to build and work bonded warehouses. In July, 1905, the Quay Company opened a small experimental bonded warehouse on the Galata quay. The Turkish custom-house administration under the old règime was not disposed to give facilities, and the experiment was not followed up until the Constitution was re-established.

In 1909 the Quay Company opened with great ceremony a large bonded warehouse on the Stamboul quay. Speeches were made inaugurating a new epoch for trade in Constantinople. But, unfortunately, things have stopped there. The large warehouse has been let entirely to Persian carpet merchants and is proving a great boon to the transit trade in carpets, which are brought here from Persia, stored, unpacked, washed, repacked and sold under bond, and then reshipped, mostly to America. But there is still no bonded warehouse room for general trade.

A properly managed system of warehousing goods under bond, with the issue of warrants on which importers could obtain advances, should prove a profitable investment for capital and would certainly do much to assist the import trade of Constantinople. If it were possible to arrange that goods could be rè-exported from these bonded warehouses to neighboring countries free of duty, foreign buyers would be encouraged to continue to visit Constantinople.

Turkish custom-house statistics. — The Turkish custom-house statistics for the 12 months, March, 1910, to February, 1911, have lately been issued, and for the first time are published in French as well as Turkish.

They are based on the system of declaration of value and quantity, introduced by Sir Richard Crawford, and are more reliable than any statistics hitherto published by the Turkish custom-house.

(Great Britain — Diplomatic and Consular Reports. Annual Series 1913, No. 5045. p. 9.)

Land Tax. — Prior to the date of Du Velay's book (1903), the last law regulating the land-tax was promulgated in 1889. Both buildings and lands were taxed under this law. All immovables, mulks or vacoufs, possessed by Turks or foreigners, were subject to the tax.

The following properties were exempt: Domains belonging to the civil list; religious establishments, charitable institutions, common pastures, the Province of Hedjaz, the vilayets of Bassorah. Bagdad, Mosul, and Tripoli.

Valuation. The valuation of land is determined by the selling price. " In Turkey, there is no land-survey (cadastre) in the exact sense of the word. The institution which takes its place is the Defterhane, . . . It would be a great illusion to believe that the Defterhane approaches even distantly what Europeans call a land-survey. The land-survey is the description, at the same time as the valuation, of all the parcels of land cultivated or tillable . . . in brief, it is a map of the public or private property. . . . In Turkey nothing similar exists. The Defterhane could be compared to a vast bureau of mortgages in France. In registers, which resemble many of those kept by our commissioners of Mortgages in France, are transcribed the changes of ownership and the acts establishing the origin of the property. The Defterhane is the Concentration of all the titles of properties, nothing more. There is no classification of lands, nor of parcels . . . The Defterhane cannot be of much use for fixing the importance of the tax, either on buildings or lands. In practice, it is seldom consulted."

A commission, one-half authorities of the central government and one-half chosen by the councils of the district, apportion annually the land-tax. In reality, once fixed, it remains unchangeable. The commissions are partial to the influential and the rich.

Those pay the least who are the most able to pay. The assessed valuation is not affected even by the actual sales. "Nothing is more easy in Turkey than dissimulation in selling price."

The land-tax rests lightly on urban, heavily on rural land. In addition, the products of the soil are subject to the dîme.

" . . . we judge that a radical reform is necessary. It would consist in the suppression of the emlak-verghissi on rural property, as well as on buildings used in the exploitation of the land, and to leave it only on urban property and buildings not connected with agricultural exploitation. It would be replaced by the impost on immovables.

"To this impost, based on the rental value of the apartment or house, every tax-payer would be subjected without distinction. Renters or proprietors would be divided into two groups: (1) rural renters or proprietors; (2) urban renters or proprietors. Each of these two classes would then form the object of a classification according to the importance of the rent, and of the city (if the tax-payer were urban)."

(Du Velay pp. 656, 659.)

Business or Professions Tax: Temettu. — The temettu is a tax collected on the annual profits of every person occupied in commerce, arts or the sciences. Originally, 3 per cent.; raised in 1888 to 5 per cent.

It is in force only in the provinces, not in the capital. Foreigners are not subject to it. All classes of employes are exempted. Peasants in Europe were exempted in 1896; peasants in Asia were exempted in 1897.

The rate of the tax varies according to need. The estimating of profits is done by sworn experts, supposed to be honest and disinterested. They are four in number: two appointed by the authorities of the State and two by the councils of the districts.

(Du Velay p. 661.)

"This tax causes much discontent as much because of its arbitrary assessment as of the manner in which the collection is effected. Not only is there no exempted minimum, but the daily wage is taken as a basis on which to pay without examining whether the journalist has been occupied all the year or has been without work during a certain period . . . The tax-payers undergo great difficulties paying important arrears and the provincial authorities proceed to their collection with an extreme rigor which, sometimes, exercises a bad influence on commerce and industry; a factory, for example, suddenly sees itself deprived of a great part of its workers, arrested for the non-payment of the arrears of the temettu, and,

for the same reason, passports necessary to travel are refused to a drummer whom important business obliges to travel into another locality."

(Morawitz p. 75.)

Tithes: Farm Product Tax. — The tithe was originally a tax of one-tenth. Now about 12 per cent.:

10 per cent. to the	Government
1	Agricultural Bank
½	public instruction
6/10	military armaments

(Morawitz p. 78.)

"If ever a tax lent itself to criticism, withstood passionate polemics, caused counsel and objurgations, was subject to fluctuations in rate, of alterations in its collection, it is without contradiction the tithe . . . As for us, we feel that not only is the tithe an excellent tax in Turkey, because it conforms in the first place to the religious spirit of the people, and because it is deeply rooted in their customs, but also because the farming itself, so decried and condemned by all, could only with great difficulty be replaced.

This is not to say, however, that the system at present in force could not be improved . . .

. . . The payment of the tithe on fresh vegetables and fruit should be in cash, in conformity with the price established by the councils of the ancients in agreement with the authorities.

Two modes of collection of the tithe are at present used. The farm, properly speaking, and collection en règie. The latter method, however, is only rarely employed; it is in some sort a derogation from the general rule, which is the farm.

The Farming of Taxes. — It takes place annually, except for the tithe of the olives, which occurs biennially, a little before the harvest and in each village.

The bids are opened in the presence of the Council of the Ancients and of a delegation of the government. The farmer must be an Ottoman subject and furnish a guarantee in immovables at least equal to one-half the price of his contract. The farmer, as soon as the contract is decided in his favor, becomes owner of the tithe and encounters no further intermediary between him and the cultivator, of whom he is the direct creditor . . .

If no farmer presents himself or if the offers appear insufficient, the tithes are collected directly. In this case, an exciseman visits the places where the crops are found. Assisted by two members of the Council of Ancients of the village, he fixes for each cultivator, after having valued his crop, the amount of the tithe which it should pay. The owner of the crop receives then a memorandum

detached from a stub-book, on which is noted the quantities of products to deliver.

In both cases, the cultivators are bound to deliver the tithes at the depots, as soon as the crop is harvested; if there is delay, he can no longer pay in kind, but must pay the value of the tithes in silver."

Losses are due to:

1. Insufficience of the guarantees of immovables pledged by the farmer, who often abandons the immovables to the State;
2. Difficulty in adjusting bids to the condition of the crops;
3. Burdens of transportation resting on the peasant.

(Expenses of decimation [valuation?], 1911-12. 10 082 145 p.)

(Morawitz, 80.)

The tithe is "a most irrational system and brings about regretable consequences . . . The Armenian revolts of 1894 originated from them; it was only when the naval demonstrations of the European powers fired the Armenians with deceiving hopes and when the Musselman soldiers were charged with repression, that the insurrection assumed the character of a war of races or religions which it did not have at the beginning." As a remedy, "It will be necessary to extend to direct taxes that which has been done for the indirect contributions: create for the budget, properly so-called, of the Minister of Finances, an institution, not assuredly copied from the Administration of the Public Debt, but offering certain analogies to it, in using a very large Turkish element which, regularly paid and well organized, can furnish officials honest, loyal and conscientious, as has been proved by the experience of the Debt, the light-house administration, and many railroad companies. When Europeans are assured against the arbitrary whims of the authorities, foreign governments will no longer have serious motives for exacting for their nationals and proteges exemption from the impost."

(Du Velay pp. 668, 669.)

This tax is levied on a system which has the disadvantages both of discouraging cultivation and being wasteful and comparatively unproductive. Its incidence on individuals is also in many cases unfair and crippling. The whole system is in need of radical revision.

(Great Britain — Diplomatic and Consular Reports. Annual Series 1913, No. 5107, p. 10.)

Excise Taxes. — Excise taxes consist of an excise-tax and a license tax.

" Since the administration of the Debt has assumed the management of this tax, the Government has done much to encourage the wine industry and to combat foreign competition . . . Exported wines are accorded a rebate of one-half of the excise-tax and exemption from the export tax.

Nevertheless, the native products are still in a greatly disadvantageous situation to compete with imported spirits, because they are burdened with imposts equivalent in sum to 29½ per cent. of the value of the products (12½ per cent. tithes, 2 per cent. military surtax, and 15 per cent. excise) while foreign products have only to pay in Turkey the impost duty of 8 per cent., and moreover foreign importers may pay in kind, a right which is not accorded the native producers."

Wines are valued by an exciseman, the moukhtar, and the ancients of the quarter or of the village. Appeals lie to the Administrative Council of the vilayet and to the Council of State.

(Young p. 147.)

Live Stock Tax: *Aghnam.* — " Delegates of the authorities are charged, before the month of March, to proceed to the enumeration of the flocks and of all animals subject to the tax. Each owner receives a bulletin mentioning the sums which he must pay. Different from the other taxes, the collection of which is intrusted to the mouktars, the aghnams are turned directly into the treasury of the cazas and sanjaks by the tax-payers who have the option of payment in three equal installments: March, April, and May.

Of all taxes, the aghnam is the one which returns the most easily and which leaves only an insignificant amount of arrears."

(Du Velay p. 673.)

Real Estate Transfer and Inheritance Tax. — From March 1, 1915, sale and donation between living persons of real property on mulk tenure are subject to a tax of five per cent. on the value of the immovable. The sale of land émirié is subject, as in the past, to a tax of three per cent.

" The exchange of immovables of all kinds is subject to the same tax on the highest value of the immovable."

Art. 2. Successions *ab intestato* of real property are subject to the following taxes:

On successions received by the ascendants or descendants, 1½ per cent.; the surviving husband or wife, 3 per cent.; brothers and sisters or their descendants, 4½ per cent.; other relatives, 6 per

cent. Transmission by testament of immovables possessed in full proprietorship is subject to a tax of 10 per cent.

Valuation. Art. 4. " The above taxes shall be collected on the basis of the value for which the immovable is inscribed on the registers of the census. However, in case of sale, they shall be collected on the basis of the price at which the immovable is sold if this price is superior to the registered value.

" In the case of immovables which figure on the said register only for their rental value, the selling price shall be determined in conformity with the law of February 28, 1328 (1913)."

(Provisional law modifying the taxes collected on sales and successions of real property. Bull. de Stat. Feby. 1914.)

Impost of Prestations. — This tax is imposed on all males, 18-60. Infirm and soldiers exempt.

Art. 4. " Tax-payers who refuse to pay the impost of prestation and who have no seizable goods shall be conducted by public force . . . to be employed as simple workers in the execution of these works up to the discharge of their debt . . . "

In 1910 collection of prestations in kind was abolished. This had never formed an important part of the collections.

(Provisional law relative to the impost of prestations. Bull. de Stat., Feb., 1914, 45.)

Tobacco Monopoly. — " From the beginning of the year 1884 the tobacco revenue has been worked as a monopoly by a company formed under Ottoman law, styled " La Regie Imperiale Cointèressèe des Tabacs Ottomans." This company has the absolute monopoly of the manufacture and of the purchase and sale of tobacco throughout the Ottoman Empire, with the exception of the Lebanon and Crete, but exportation remains free. It is bound to purchase all tobacco not exported at prices to be agreed between itself and the cultivators; if no agreement can be arrived at, the price is fixed by experts. It is obliged also to form extrepots for the storage of the crops at reasonable distances from each other, and, on certain conditions, to grant advances to cultivators to aid them in raising the leaf. The cultivators, on the other hand, may not plant tobacco without permits from the regie, although the power of refusing a permit, except to known smugglers or persons of notoriously bad conduct, seems to be doubtful; nor may they sell to any purchaser, unless for export, except to the regie, while they are bound to deposit the whole of the tobacco crops which they raise in any one year in the entrepots of the regie before the month of August of the year following, and may not move any tobacco from the place where they cultivate it without the regie's express authority. In order to facilitate supervision, a minimum area of one-half of a *deunum* (a deunum = about one-

fourth of an acre) is fixed for ground upon which tobacco may be cultivated; in the suburban districts of Constantinople and some other towns, and in enclosures surrounded by walls and attached to dwelling-houses, it is altogether prohibited. For its privileges the regie has to pay a rent of LT750,000 per annum to the government (assigned to bondholders), "even if it has no revenues at all," and after the payment of a dividend of 8 per cent. to its shareholders, and certain other deductions, it has to share profits with the government and the bondholders according to a sliding scale agreed upon between the three parties. The regie did badly during the first four years of its existence, owing principally to two causes: (1) its ineffectual power to deal with contraband to which the system described above leaves the door wide open; (2) the admission of other than Turkish tobaccos into Egypt, which deprived it at once of about LT100,000 per annum. So great were its losses that in the year 1887-1888 it was obliged to write them off by reducing its capital from L2,000,000 to L1,600,000. At the same time it was granted an extension of penal powers, and the losses on *reftieh* (duty on tobacco exported to Egypt) were to be partially borne by the public debt administration. Things went better with it from that time until 1894-1895, when, owing to internal troubles in the empire, and the consequent fear of creating worse disorders, by the strict enforcement of the monopoly, the government withdrew most of its support, and contraband enormously increased. The following table shows the movement of the revenue of the regie from the year 1887-1888 to 1908-1909 inclusive:"

Average for 5 years	Gross receipts from all sources	Total expenses, including fixed charges	Net revenue
	LT	LT	LT
1887-1892	1,924,264	1,735,896	188,368
1892-1897	2,330,786	2,037,190	*293,596
1897-1902	2,098,537	1,898,646	*199,891
1902-1907	2,511,921	2,104,739	407,182
Year 1907-8	2,660,895	2,146,864	514,031
" 1908-9	2,597,909	2,167,795	430,114

(Encyclopedia Britannica, Eleventh Edition, Article "Turkey.")

Salt Monopoly.— The salt monopoly was created in 1862 to guarantee the loan of 200,000,000 francs destined to the payment of the Caimè. It is administered by the Council of the Debt.

(Young p. 124.)

"But the exploitation of this monopoly encounters difficulties, by the very reason that the country is rich in salt marshes, mines,

wells, and other sources of salt, that are found everywhere in the wide expanse of the Turkish territories in Asia and also in Europe. The absence of railroads, of easy means of communications, . . . render surveillance everywhere difficult, and illusory in a number of provinces, such as those of the Yemen, Seert and Bagdad. In the latter vilayets, contraband trade is endemic, and efforts to suppress it have remained almost sterile. On the contrary, the means employed by the Debt Administration on the coast of the Black Sea and on the Mediterranean littoral have received their recompense."

(Du Velay p. 479.)

For expenditures of the Turkish Government see Budget for 1912 already referred to.

For a description of the expenditures taken from the Budget for 1910-1911 see the article on Turkey, Encyclopedia Britannica, Eleventh Edition.

Financial Administration. — Ministry of Finance. Since 1881, the Minister of Finances has had nothing to do with the debt. Since 1900, he has been deprived of all effective control by the "Financial Commission of Tophane."

"The Ministry of Finances has become rather a bureau of correspondence and accounting, which occupies itself only with expedients to meet the daily charges which fall upon it."

(Young p. 15.)

Financial Statistics. Prior to the Revolution of 1908 there were no reliable statistics of Turkish finances, issued by the Government.

In 1909, however, the Ministry of Finances began the publication of a detailed *Bulletin Annuel de Statistique,* containing full tables, charts, etc., of the financial operations of the Government, being especially full on the side of revenues.

In 1910 the Ministry began the publication of a monthly *Bulletin de Statistique,* which now appears in both French and Turkish. Each issue contains a statement of the revenues compared with the corresponding month of the preceding year, the collections of the vilayets, the budgetary credits of the different departments, the amounts liquidated to date, the standing of Ottoman bonds on the different bourses, and the laws, decrees, ordinances, etc., promulgated during the month.

Financial Commission of Tophane. Established 1900. Twelve members, comprising influential ministers and officials. Exercises a general financial control and studies administrative and fiscal reforms.

Appears to have been superseded by the Commission of Financial Reform.

(Young p. 15.)

Commission of Financial Reform. Established 1909. Law relating to the commission of financial reform, August 11, 1329, provides: That the commission shall be composed of the minister of finance, eight members specially named, the Financial Counsellor, the Director-General of Control, the Director-General of General Accounts, and the Director-General of Revenues.

The commission shall examine projects of law and ordinances prepared by the Minister of Finance and plans for financial reform, measures relating to the reorganization and reform of the departments of Customs, Posts and Telegraphs, and the fiscal part of the Defteri-Hakani; measures relating to the assessment, incidence, and collection of taxes; propositions formulated by the inspectors of finance on the subject of reform; the budgets of the different departments with a view to the preparation of the general budget.

M. Laurent, foreign counsellor of the Minister of Finance, was a member of the Commission of Financial Reform.

(Bull. de Stat. Aug. 1913 p. 27.)

Commission of Examination. "This commission must function under the presidency of a high official of the Ministry of Finance and comprise the directors of the different sections of this Ministry. The nomination and advancement of the employes of the Treasury are among its duties."

(Legislation Ottomane 1912 p. 538.)

Administrative Training. Turkey has a "School of Finances," for the purpose of preparing young men for the service of the Minister of Finance and to perfect the technical knowledge of the administrative officers of the Government. The first school year was that of 1910-1911.

Courses and Subjects of Instruction.

Course I. Four months. Class 1, Assessment; Class 2, Collection. An examination at the end of the course.

Course II. Two years. Aim of course, the preparation of malmudirs, collectors, receivers, and other similar officials.

Subjects:

Political Economy, History of Ottoman Finance, General Rules of Taxation, Financial and Administrative Organization, State Property, Law of Direct Taxes, Law of Indirect Taxes, Bookkeeping, Legal notions, Arithmetic and Geometry, Composition, Economic Geography, Budgetary Law, General Accounting, Statistics, International Law.

Course III. For officials in the Ministry of Finance.

Subjects:

Mathematics, Elementary Accounting, Statistics, Administrative Law, Turkish History, Turkish and Mediterranean Geography, Rules of Interest, Accounting, Assessment, Turkish and Foreign Budgetary Legislation, Constitutional Law, Capitulations, Composition.

Instructors:

All Turkish.

Students:

Course I.: 273; Course II.: 121; Course III.: 194.

Many native Turks have received training in the Debt Administration.

(Bull. de Stat. 1911 p. 350.)

Cours des Comptes. Created in 1868. Charged with the verification and control of the accounts. Twelve members. The Cours des Comptes is independent of the ministries.

(Young p. 17.)

Financial System and Administration: *Vilayets.* — "The whole of the empire is divided into Vilayets, or governments, these subdivided into Sanjaks, or minor provinces, these into Kazas, or districts, with occasional subdivisions into Nahies, or subdistricts. A Vali, or governor-general, representing the Sultan, and assisted by a provincial council, is placed at the head of each Vilayet. The minor provinces, districts, etc., are subjected to interior authorities . . . under the superintendence of the Vali. The division of the country into Vilayets has been frequently modified of late for political reasons. For similar reasons several of the Sanjaks of

the empire are governed by Mutessarifs reporting direct to the Ministry of the Interior. The tendency has been to increase the number of these so-called 'independent' Sanjaks by detaching ordinary Sanjaks from the Vilayets to which they have heretofore belonged. All subjects, however humble their origin, are eligible to, and may fill, the highest offices in the State.

The whole system of provincial administration has been the subject of a great deal of experimental legislation since 1908."

"A new and comprehensive 'Law of Vilayets,' having for its main ostensible purpose to decentralize authority, was promulgated by the executive in March, 1913."

(For an account of this measure, see Statesmen's Year Book, 1914, p. 1346.)

" . . . it has been of little practical effect, and the various schemes for reforming the administration of the Asiatic provinces, including that of dividing the Empire into Inspectorates-General and placing the two comprising the Armenian provinces under European Inspectors-General, have completely broken down owing to the reflex action of events in Europe. Two Inspectors-General, a Norwegian and a Dutchman, were actually appointed in 1914, but one of them never even reached his post, and by October, 1914, they were both on indefinite leaves of absence. A British Inspector-General was also appointed to the Ministry of the Interior early in 1914. His functions were terminated by the outbreak of war with Turkey."

(Statesmen's Year Book, 1917, p. 1346, 1347.)

The *vali* is appointed by the Sultan following the decision of the Council of Ministers on nomination of the Minister of the Interior. Removal in same manner. Appointment of other officials is by the competent ministers.

To suppress smuggling the vali can give orders to the commander of ships and the commander must obey the orders.

Administrative Council. — Comprises: the Vali (President), the chief accountant, the secretary-general, the director of public instruction, the engineer-in-chief of public works, and the director of agriculture, the mufti, the spiritual chiefs, and elected members.

The Budget of the Vilayet. The budget of the vilayet is divided into parts:

1. Ordinary budget, and
2. Extraordinary budget.

1. *Ordinary Budget*:
   Expenditures, permanent:
   Salaries of officials, etc.

Expenses of tax-collection.
Maintenance of roads.
Repair of monuments and public works.
Schools.
Salaries of faculty and expenses of maintenance and construction of technical schools.
Maintenance of public buildings, custom-houses, etc.
Maintenance of charitable institutions.
Public printing.
Furniture and traveling expenses.
Election of members of general council.
Other necessary expenses.

Expenditures, extraordinary:

Those necessary for the institutions and constructions newly created in the vilayet, as well as those which are completed outside of the provisions of the ordinary budget.

The chapter of expenditures of the provincial budget must absolutely contain all the articles mentioned above.

Credits pertaining to articles not provided for in the budget are authorized by the Minister of the Interior, on proposal of the Vali. With this exception, the budget established by the General Council cannot be modified.

Economies effected during one fiscal year are added to the budget of the following year.

The budget must receive the sanction of the Minister of the Interior.

The budget is prepared by the Vali before the convocation of the General Council. It is submitted first to the inspection of the commission of the vilayet.

The Vali makes orders for payments and transmits vouchers every month to the committee of the vilayet.

He arranges each year the balance sheet of the preceding year, submits it to the commission of the vilayet, and then to the General Council.

The Vali has a special cabinet of accountancy, which is placed under the orders of a director. It keeps an

exact account of the salaries and expenses provided for in the budget. "The employes of this special bureau are responsible in the same respect as other officials and their salaries are paid on a special chapter of the budget of the vilayet."

"The director of the special bureau sends to the Vali, a month and a half before the meeting of the General Council, the general balance of the budget of the preceding year as well as the new budget, with summary tables attached to the former, which are transmitted to him by the different sections, as well as the table relating to the accounts of the vilayet."

The director of the bureau of accounts collects the taxes, and controls expenditures on the order of the Vali, and "all operations pertaining to the accounts of the vilayet."

The revenues of the vilayet are deposited at the local branch of the Agricultural Bank.

The director of the bureau of accounts is nominated and removable by the Vali.

General Council. — Members are elected by the kazas.

Commission of the Vilayet. — Consists of four members elected by and from the General Council.

Examines the budget.

Examines the monthly report of expenses.

Its duty is "To concern itself with credits of the budget relative to expenses unprovided for and proceed to the transfer of the amounts in the same chapter."

"The transfer of amounts from one chapter to another is subject to the Imperial sanction following a decision of the General Council or of the commission . . . "

(Provisional Law relative to the General Administration of the Vilayets. March 13, 1329.)

(Bull. de Stat., March, 1913, 24.)

Ordinance concerning the corps of financial control. 1909.

Art. 1. The corps of financial control has charge of the financial examination and verification of all public services in the capital and in the provinces.

Art. 2. It may demand the presentation of any evidence, and may suspend accountants when a deficit, a fraud, or a refusal to produce documents occurs.

Art. 3. Members of the corps are solely responsible to the Ministry of Finances.

Art. 4. Under the Minister of Finances the service is directed by the Director of Control. There is also a Deputy Inspector and a sufficient number of employes.

Art. 5. The corps of control includes:

5 inspectors of the first class,
10 " " " second class,
12 " " " third class,
23 " " " fourth class.

Art. 8. The inspectors are appointed after examinations. They first act as assistants, and are named inspectors only after two years of service and a new examination.

Art. 10. Advancement is by seniority from one class to the next higher.

Duties of inspectors.

Annex to the above ordinance.

Art. 2. The duties of inspectors shall be:

To examine the cash and accounts of all public services.

To examine all materials belonging to the State.

To inspect immovables belonging to the State and look into the honesty of those in charge.

To report in writing all infractions of the law met with.

To examine the method of collecting taxes and investigate abuses.

To take measures to assure the security of materials belonging to the State.

To investigate and make known improvements to be introduced into the service under their control.

Art. 3. The Minister may send out special inspectors.

There is one inspector in each vilayet, and others or assistants as necessary.

At the beginning of each year he submits a plan of his labors.

He must inspect each bureau at least once in two years.

" On his arrival in the vilayet, the inspector must present himself to the Vali and to the military governor. He must afterward keep himself in touch with the valis, mutessarifs, kaimakams and mudirs, in order to keep himself informed of all the facts which may interest from the financial point of view the public services of the vilayet. In case of need, he can require them to furnish him

escorts to effectuate his tours and, in general, to lend him aid and assistance in the exercise of his functions."

Art. 14. "To be efficacious, the function of control must be exercised in the broadest manner, must be applied to every administrative organization, and must vary its methods according to circumstances and ends. The inspectors must be continually on the alert, and must tax their wits to discover acts of fraud and malversation, the discovery of which is often very difficult."

Art. 15. "The inspectors should be convinced of the principle that thorough verifications are much more useful than superficial labors, and that they must devote themselves to the quality rather than to the number of verifications."

Art. 18. The inspectors must not manipulate any material or make any inscription or rectification on documents. They must merely put on the accounts a statement of the condition in which they are found.

Any irregularity must be reported at once to the Minister of Finance.

Art. 24. "The mission of the inspectors is exclusively a mission of control; they must abstain absolutely from any kind of interference in the exercise of the service. They have no power to give orders to agents, save those pertaining to the suspension of an accountant."

Art. 28. Reports must be clear, concise, and precise. They must be presented with order and the observations classified.

Art. 43. Inspections must be unexpected, and the inspectors must not announce their arrival. They are not to be entertained by the officials under their control, nor accept any service or recommendation from them, or carry on any correspondence with them other than that justified by the needs of the service.

(Legislation Ottomane Vol. 1, p. 220.)

Public Debt.

"From the time of Eyubi Effendi until the end of the grand vizierate of Ibrahim Pasha (1730), the empire experienced periodical relief from excessive financial distress under the series of remarkable grand viziers who directed the affairs of state during that time, but the recovery was not permanent. Ottoman arms met with almost systematic reverses; both the ordinary and the reserve treasuries were depleted; a proposal to contract a foreign loan (1783) came to nothing, and the public debt (*duyun-i-umumiye*) was created by the capitalization of certain revenues in the form of interest bearing bonds (sehims) issued to Ottoman subjects against money lent by them to the state (1785). Then came forced loans and debased currency (1788), producing still more acute dis-

tress until, in 1791, at the close of the two years' war with Russia, in which the disaster which attended Ottoman arms may be largely ascribed to the penury of the Ottoman treasury, Selim III, the first of the "reforming sultans," attempted, with but little practical success, to introduce radical reforms into the administrative organization of his empire. These endeavors were continued with scarcely better result by each of the succeeding sultans up to the time of the Crimean War, and during the whole of the period the financial embarrassment of the empire was extreme. Partial relief was sought in the continual issue of debased currency (*beshlik, altilik* and their subdivisions), of which the excess of nominal value over intrinsic value ranged between 33 and 97 per cent., and finally paper money (*kaime*) which was first issued in 1839, bearing an interest of 8 per cent., reduced in 1842 to 6 per cent., such interest being paid on notes of 500 piastres, but not on notes of 20 or 10 piastres, which were issued simultaneously. Finally, usage of paper money was restricted to the capital only, and in 1842 this partial reform of the paper currency was followed by a reform of the metallic currency, in the shape of an issue of gold, silver and copper currency of good value. The gold coins issued were 500, 250, 100, 50, and 25 piastres in value, the weight of the 100-piastre piece (Turkish pound), 7.216 grammes, .916 2/3 fine. The silver coins were of 20, 10, 5, 2, 1 and ½ piastre in value, the 20-piastre piece weighing 24.055 grammes, .830 fine. The copper money was in pieces of a nominal value of 40, 20, 10, 5 and 1 paras, 40 paras being equal to 1 piastre. In 1851 further attempts were made to withdraw the paper money from circulation, but these were interrupted by the Crimean War, and the government was, on the contrary, obliged to issue notes of 20 and 10 piastres. Finally, at the outbreak of the Crimean War Turkey was assisted by her allies to raise a loan of L3,000,000 in London, guaranteed by Great Britain and France; in 1855 an organic law was issued regulating the budget, and in the same year a second guaranteed loan of L5,000,000 was contracted in Great Britain. In 1857 an interior loan of 150,000 purses in bonds (*esham-i-mumtaze*), repayable in three years and bearing 8 per cent. interest, was raised; the term of repayment was, however, prolonged indefinitely. In the same year another series of bonds (hazine tahvili), bearing 6 per cent. interest, and repayable in 1861, was issued; in 1861 the term of reimbursement was prolonged until 1875. In 1858 a third loan was contracted in Great Britain for L5,000,000 and thereafter foreign loans followed fast on one another in 1860, 1862, 1863, 1864, 1865, 1869, 1872, 1873 and 1875, not to mention the two Egyptian tribute loans raised on Egyptian credit in 1871 and 1877. In 1859 the settlement of palace debts gave rise to the issue of 1,000,000 purses of new interior bonds (*esham-i-jedide*) spread over a period of three years, repayable in twenty-four years, and bearing interest

at 6 per cent. Further 6 per cent. bonds, repayable in ten years, and styled *serguis,* were issued in the same year. Seeing the rapid increase of the financial burdens of the state, a commission of experts, British, French and Austrian, was charged (1860), with setting the affairs in order, and with their assistance Fuad Pasha drew up the budget accompanying his celebrated report to the sultan in 1862. Meanwhile *kaime* was being issued in great quantities (about 60,000 purses a month) and fell to a discount (December, 1861,) of 75 per cent. In 1862 further *sehims* were issued, and these and the loan of 1862 (L8,000,000) were devoted to the withdrawal of the *kaime*. Later, however, the *kaime* was again issued in very large amounts, and the years succeeding 1872 up to the Russian War (1877) presented a scarcely interrupted course of extravagance and financial disorder, the result of which is described below."

"*Floating Debt.* — This is really an accretion of undetermined liabilities which has been indefinitely, and probably alternately, advancing and receding for a great number of years, and which no previous minister of finance, or Turkish government, had the courage to face. Now and then it has been dealt with piece-meal, when some particular class of creditors has become too pressing, but it is more than probable that the piece got rid of has been more or less rapidly replaced by fresh liabilities occasioned by budgetary deficits, or by the mere accumulation of interest on debts allowed to run on."

The above quotations are from The Encyclopedia Britannica which see for a farther discussion of the Public Debt and an account of the International Commission formed for the administration of this Department.

The following paragraphs, on the same subject, are quoted from "Life of Abdul Hamid" by Sir Edwin Pears, Pages 167-177, should be read in this connection.

"Owing to the extravagance of Abdul Aziz, which, as already mentioned, led to his deposition, Turkey on the accession of Abdul Hamid was on the verge of bankruptcy. New loans were contracted with local bankers, and outside Turkey, to pay the interest on debts. The financial administration was utterly rotten, and probably not more than 40 per cent. of the taxes collected found its way into the Treasury. The Public Debt outside the Empire amounted to 190,750,000 Turkish pounds (the Turkish pound is equal to 18s. 2d.). During 1875-6 expenses rapidly increased from various causes. The amount of revenue fell. The Turkish Government were forced to recognize that some remedy must be found. They were unable to float more loans or otherwise borrow money. They were, in fact living from hand to mouth, mostly upon small loans obtained from Galata bankers."

"On September 11, 1875, Turkey had committed what in a private individual would have been an act of bankruptcy. She ordered the suspension of the payment of one-half of the interest and sinking fund from the following month, with the exception of those on the Egyptian Tribute loans, and of one made in 1855 guaranteed by the British and French Governments. Then came many make-shifts to obtain money. Paper currency, locally known as *caismes,* was issued. The Turkish sovereign or lira (the equivalent of 100 gold piastres) was the standard. The Government in issuing *caismes* declared that the one lira note was equivalent to 120 silver piastres, the usual rate of exchange being 108. The promises made by the Government were so alluring to the ignorant of the community that many of them brought forward their savings and converted their gold and silver into paper money. Gradually and rapidly its value depreciated so that within a few weeks, the happy possessor of a gold lira could exchange it for 160 paper piastres, and the poor peasants thought that the operation of their paternal Government was for their benefit. To such an extent did this fiction prevail that even the tradesmen in Constantinople made but slight advance in their prices, evidently believing that the fall in the value of the paper was a rise. When the war with Russia broke out, they began to realize their mistake, for suddenly Turkish gold rose from 160 to 300 piastres the lira, and finally no one would take the paper money, except at an outrageously low value. When the Russian War was over, the leading financial establishments in the country, of which the Imperial Ottoman Bank was the most important, refused further advances unless those which they had previously made were secured. They made a practical suggestion that six revenues paid to the Government, known as the 'Six Indirect Contributions,' should be handed over to a committee of local bankers to be collected and administered by them. After considerable negotiations this condition was accepted in principle on November 22, 1879. The 'Six Contributions' were the total revenue derived from tobacco, salt, wines and spirituous liquors, stamps, fisheries, and silk, subject to a reduction of one million sterling, but plus the contribution of Eastern Rumelia and Cyprus and the tribute of Bulgaria. All these were to go to bondholders."

"The Porte and Abdul Hamid still found the difficulty of borrowing money serious. It was indeed impossible, except by the consent of the Ottoman Bank and of the local bankers who acted in accord with it. They were determined in their own interest and in that of the foreign bondholders, that so much at least of the income of the country as was necessary to meet the interest upon the bonds, should be set apart from the general revenue for their benefit and that of the bondholders whom they represented. In order, moreover, to obtain new loans from abroad, it was equally necessary to satisfy the bondholders that old and new loans should

be secured by a sound administration. The original scheme required enlargement and amendment. It could not be left in the hands of local bankers."

"The Right Hon. Robert Bourke, M. P., represented the British and Dutch. The first idea was that the delegates should form an International Commission, but Mr. Bourke found the plan open to two objections; first, that the delegates were unlikely to agree among themselves, and second, that the Porte would not entertain a proposal by which it should be left out. The case would be one of 'reckoning without your host.'"

"Negotiations took place between the delegates and a Turkish Commission of six members, and between them and the Porte. The result was that an agreement was come to which resulted in the promulgation of a law known as "The Decree of Muharrem." Such decree bore date of December 20, 1881, or in Turkish, the 28th day of the month of Muharem. Mr. Bourke had arrived in Constantinople at the end of August, 1881. His report presented to the bondholders is dated January 10, 1882."

"The issue of this decree was an event of high importance for Turkish finance. Thereupon the Council for the Administration of the Ottoman Public Debt became a Turkish Institution, commonly known as The Debt or the Public Debt. The largest amount of foreign bonds being in English and French hands, it was decided that the United Council of Foreign Bondholders should be under an English or French President, each of whom should hold office alternately for a period of five years. (1)"

(1) Article XV, Decree of Muharem.

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"The Members of the Council of the Public Debt, acting under a succession of able Presidents who held office until the outbreak of the present war, succeeded in making the Ottoman Public Debt Department certainly the most efficient and best organized administration in Turkey, and one which would bear comparison with any corresponding administration elsewhere. It is tempting to enter fully upon the services which this Turkish Department, officered by Europeans, has rendered to Turkey as well as to its constituents, the bondholders. Some details of its achievement, especially in later years, may, however, be noted. Its gross receipts during the year 1903-4 were LT2,971,984. The corresponding receipts of 1911-12 had steadily risen to LT5,061,335, or, deducting new Customs dues, to LT3,910,150. This was an increase during the interval, of nearly one million Turkish pounds, a proof at once that the revenue of the country was increasing, and that the administration of its finance had greatly improved. Taking an average during the thirty years in which the revenues were administered by the Public Debt, there is an increase during this period of 79.07

per cent. The tables published in the Special Report on the Public Debt by Sir Adam Block in January, 1914, show that this increase in the revenues administered by the Council of the Public Debt had been steadily progressing during each of its three decades. (1) "

(1) Sir Adam Block's Report, pp. 17-19.

" Provision had been made in the Unification Scheme for redemption. In 1904-5 (which is taken because redemption only took place in six months of the previous year, 1903) LT222,398 represented the value of debts redeemed. In 1912-13 L3,621,610 was devoted to redemption. During the years from 1903 to the end of 1913, including the six months of 1903-4, no less a sum than LT4,329,028 had been applied for that purpose, the whole representing 10.24 per cent. of the Public Debt. Bondholders as well as everybody who wished well for the financial situation of Turkey, must have recognized that this was a brilliant result. In addition, the effect of dealing with Turkish Lottery Bonds, which, though not quoted on the London Exchange, are a favourite form of investment on the Continent, must be noted; on September 1, 1903, the date of the Decree of Unification of the Turkish Debt, the nominal capital of the Lottery Bonds was LT13,488,789. Between 1903 and the end of 1913 bonds for the nominal value of LT509,604 were cancelled. As mentioned in the case of the conceded revenues in the period between 1903-4 and 1912-13 these Lottery Bonds were as usual drawn for cancellation, the number drawn being proportionate to the amount which the Public Debt had at its disposal for dealing with them. In 1904-5 the nominal value of drawn bonds was LT41,663; this steadily increased until in 1914 LT79,755 were drawn. Provision had been made also for a Reserve Fund of two million pounds sterling. This Reserve Fund still exists and, according to the latest information, is intact."

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" During the early years of the Public Debt, the inspectors and the chief officials were partly foreigners and partly natives. The department was fortunate in obtaining a few foreigners who spoke Turkish well, and who could deal with the proprietors without the necessity of native interpreters. A strong and proper desire existed in the Council to employ natives wherever possible. They soon found, especially amongst the Armenians, trustworthy and efficient servants, who, once they recognized that the pilferings and even wholesale robberies of previous years would no longer be tolerated and that they would be protected, lent valuable aid to their employers. Indeed, on many occasions the Council of the Public Debt have borne testimony to both the sagacity and knowledge which were displayed by the native contingents of assessors. It was shown for the first time in recent Turkish history, that the country

could produce as efficient public servants as any other, once it was recognized that honesty was the best policy, as under the Public Debt it soon proved itself to be. Every year increased the efficiency of the Department."

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"The extent of smuggling, especially of tobacco, induced the Department to approve a project which met with no opposition from the Turkish Government, of separating tobacco from the list of the 'Six conceded revenues.' A company was formed, mainly with French capital, to purchase the rights of the Public Debt Department, to deal with tobacco. The formation of such a company, which was to work in co-partnership with the Government, had been anticipated during the visit of Mr. Bourke. In return for these rights the company was to pay LT750,000 per annum to the Public Debt. The company itself was officially described as 'Co-interested with the Ottoman Government,' and as a company '*en-regie*,' literally, 'in trust.' The Regie Company, as it is usually described in Turkey, was never greatly approved by Abdul Hamid. Under the provisions of its constitution it had the right to appoint 'coljies,' or officers, to preserve the rights of the Regie. For some years the conflicts which took place between them and the native smugglers were almost constant in every part of the country, the worst offenders being ill-paid soldiers. Abdul Hamid probably for this reason never entered cordially into the plans for suppressing smuggling."

"The Department had a long fight in order to suppress smuggling. It would probably be difficult to find a smoker in Turkey who had not had offered to him packages of Turkish tobacco at a price less than half that of the same quality sold by the agents of the Department of Public Debt, or its present substitute, the *Regie Ottomane de tabac*. The smuggling of tobacco, indeed, in the early years of the Department was general throughout the Empire."

(Pears: Life of Abdul Hamid, pp. 167-174, 177.)

"Two methods were suggested of determining the amount of debt to be taken over by each of the allied States. The first was the simple process of comparing the revenues from the conquered territories with the total revenues of the Turkish Empire, and making the division accordingly. The second, more complicated system, proposed to take into account the ceded revenues and the guarantees for the various loans, and to consider in what proportion they depend upon the ceded territories. This latter system eventually found favor with the majority of the Committee. The Balkan States sent delegates to assist the Commission in its labours, and they cleared the ground at the start by expressing their willingness to entertain the idea of assuming part of Turkey's Debt obligation,

out of consideration, not for Turkey, but for the interests of the bondholders. But they argued, through legal representatives, against the theory that any victorious State is morally obliged to shoulder the obligations of conquered territory. In adopting a conciliatory attitude they probably had in view their chances of success in the matter of compensation claims."

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"From the investigation of the Debt Committee it appears that the Balkan States should undertake responsibility for from 15 per cent. to 20 per cent. of the Ottoman Debt. But the Committee decided not to advise the imposition of an annual charge of some LT1,000,000 on the States without taking other circumstances into account, such as the state in which the ceded territories are at the time of annexation, and the expenditure necessary to ensure a restoration of order. Nor did they lose sight of the fact that the Balkan nations emerge from the war in a state of exhaustion, and will themselves need fresh financial accommodation on a large scale before they can meet their existing obligations."

(The Economist, Aug. 30, 1913 p. 410.)

For the Decree of Muharrem, see Young, Vol. V., 69-95.

These negotiations and the Decree which followed embraced the following subjects:

1. The liquidation of the loans.
2. The fixing of the rate of interest and of amortisement.
3. The concession of revenues.
4. The organization of the Council of Administration of the Ottoman Public Debt.
5. Various arrangements of a special and transitory nature.

The Decree of Muharrem embraced in general all the internal and external debt, except:

1. Loans guaranteed by the Egyptian tribute.
2. The loan of 1855 guaranteed by Great Britain and France.
3. The Russian war-indemnity.
4. The floating debt.

The Decree of Muharrem conceded to the Debt Administration the following:

1. Revenues from monopolies and indirect contributions.
   a. Monopolies of tobacco and salt consumed in the Empire, not including cigars, snuff, chewing tobacco, imported tombac, and the tithes and customs on tobacco.

b. Stamp duties and certain spirit duties.
c. Impost on the fish of Constantinople and its environs.
d. Silk tithe.

2. The surplus of customs receipts resulting from an expected revision of the commercial treaties.
3. The surplus of the revenues which should result from the application of professional and business licenses, compared with the receipt at present from the impost of the temettu. (A license law has not been applied.)
4. The Bulgarian tribute.
5. The surplus of the revenue of the island of Cyprus.
6. Dues from Eastern Roumelia.
7. The produce of taxes on tombac after subtracting 50,000 Ltq. paid in aids.
8. The shares of Servia, Montenegro, Bulgaria and Greece in the Turkish debt.

Organization of the Council of Administration.

Consists of:

1. One delegate representing English bondholders. Named by the Council of Foreign Bondholders at London. Represents also the holders of bonds in the Netherlands and Belgium.
2. One delegate representing French bondholders.
3. One delegate representing German bondholders.
4. One delegate representing Austro-Hungarian bondholders.
   These delegates are named by the syndicates of banks of Paris, Berlin and Vienna.
5. One delegate from Italian bondholders.
   Named by the Chamber of Commerce of Rome.
6. One delegate from Ottoman bondholders.
   Named by the General Assembly of the bondholders convoked by the perfect of the city of Constantinople.
   These delegates cannot be Turkish officials, or diplomatic, consular, or military officials in Turkey.
   Term of office: Five years.
   The President is alternately English and French.

Director General. — At the head of the Administration is the director-general. Represents the Council. Other employes of the Administration are named by the Council. These officials are con-

sidered to be officials of the State. "The Government has reserved the right to control the administration of the Debt by means of a special commissioner and of controllers, named by the Government and accredited to the service of the Council. The Commissioner must be invited to sit at each session of the Council; he has a consultative voice." He acts as intermediary between the Government and the Council. The Controllers act as they do in other branches of the administration.

The function of the Council of Administration is to collect the ceded revenue. Its budget is incorporated in the budget of the Empire and it reports to the Minister of Finance.

Powers subsequently conferred on the Debt Administration. Since the Decree of Muharrem, additional powers have been conferred on the Debt Administration. (Du Velay, 537.) Since railroads develop consumption, improve the economic condition of the country, increase the ceded revenues, and decrease smuggling, Turkey has not hesitated to call for the intervention of the Debt Administration to aid in securing loans for railroad building. "It suffices to say that every special guarantee which has been conceded by the Ottoman government to the contractors of various loans, as also to railroad concessionaires, the pledge, in a word, of the loan or of the kilometric guarantee is confided to the Council of the Debt." Du Velay states that the Turkish railroads of the last twenty years could not have been built without the aid of the Debt Administration. "Every financial combination of any importance has rested on the Debt, and those of the future depend in large part on its cooperation and its aid . . . The credit of Turkey is so intimately bound up with this institution, that if it should disappear, Turkey would fall back to the condition in which it found itself in 1881."

(Du Velay, pp. 426, 436, 438.)

The debt since 1914. — According to the New York Times of Nov. 28, 1914, the Turkish Government announced that interest on the 1909 Turkish loan would be paid only to bondholders presenting themselves at the central office of the Minister of Finance in Constantinople. The 1909 loan of 30,000,000 was put on the market by the Imperial Ottoman Bank and Morgan, Grenfall and Co., 20,000,000 was subscribed in Paris; 10,000,000 in London. This means that interest payments will probably be suspended on most of these bonds during the war.

War loans. — Reliable statistics are, of course, lacking for financial operations since Turkey entered the war.

The London Times of February 17, 1916, stated that up to that time Germany and Austria-Hungary had advanced to Turkey since the outbreak of the war a total of 21,613,816 Turkish pounds.

The following statement is taken from La Dette de la Turquie, in Mouvement Economique, Vol. xxi., No. 121 (Jan. 1, 1915), p. 30.

Of the Turkish debt, the French hold about 55 per cent.; the Germans, 25 per cent.; and the English 20 per cent.

The debt on Sept. 14, 1913, was composed as follows:

Specially guaranteed by the Egyptian Government: 410,037,200 francs.

Guaranteed by the conceded revenues: 1,110,399,000 francs.

Other debts: 1,430,160,000 francs.

Treasury accounts at end of 1913: 355,575,000 francs.

Temporary loans since: 25,000,000 francs. Deducting the amount guaranteed by the Egyptian Government, there remains a total of about 3,350,000,000 francs owed by Turkey to foreign powers.

In the fiscal year, 1912-1913, the net revenue conceded to the Debt amounted to 92,583,350 francs. After paying the service of the Debt, a surplus of 39,648,975 was left.

Turkey paid the interest on her debt regularly during the Italian and Balkan wars. But in the last three years an enormous floating debt has accumulated.

The following statement is from: La Situation Financiere de l'Allemagne, de l'Autriche-Hongire et de la Turquie a la date du 30 Juin 1917. Revue d'Economie Politique. Sept.-Dec., 1917, 362. Based on articles in the Frankfurter Zeitung, which in turn were based on the report made in February, 1917, by Djavid Bey to the Ottoman Parliament.

In the middle of 1917 the Turkish debt amounted to 3812 millions of francs.

Two classes of war loans:

1. Payable in gold, serving as security for Turkish paper money.
2. Paid in marks, in merchandise or in services.

The first class amount to 79 million Turkish livres, apportioned as follows:

a. Five million T. livres for mobilization.
b. Spring, 1915, 6 million T. livres, 4 from Germany, 2 from Austria-Hungary — Devoted to the administration of the Debt, which emitted an equal amount of certificates having forced currency. These constitute Series I of Turkish paper money. Redeemable in metal six months after the end of the war.
c. An advance of 19.60 million T. livres. Paid in German treasury bonds falling due after the war.
d. Autumn, 1916. 27.77 million T. livres. Paid same as (c). These loans covered Series II., III., and IV., of Turkish paper money.
e. Early in 1917. 5th loan. Payable up to Aug., 1917. 32 million T. livres used to cover new issues of paper.

Second class of loans. — 70 million T. livres.

a. 25 million T. livres repayable three years after the peace, or on default of repayment, transferable into long-time bonds with interest guaranteed.
b. 25 million T. livres for munitions. Conditions of repayment not mentioned.
c. 20 million T. livres for freight. Conditions of repayment not mentioned.

Additional Austro-Hungarian loans not mentioned above include 240 millions of crowns furnished by Austro-Hungarian bankers to pay for purchases of the Skoda and other factories, as well as to pay a Turkish debt of 40 million crowns on the Orient railroad.

" Djavid Bey informed the Turkish Senate that German financial assistance would not cease with the war. He expressed the hope that at the peace 100 to 150 million T. livres would be loaned to agriculture, to public works, to commerce, and would assure a rapid economic development which would permit Turkey not only to meet its budget but also to begin the payment of its debt."

The London Times of Nov. 18, 1916, said that the Council of Foreign Bondholders has received a report of the Council of Administration covering the period from March, 1914, to March, 1915. The gross receipts declined by 1,797,438 pounds. The Turkish Government failed to pay to the Debt Council certain sums agreed upon amounting to 268,000 T. pounds. After paying the service of the Unified Debt and Lottery Bonds a surplus of 730,712 T. pounds remained of which 538,034 T. pounds was paid to the

Turkish Government, and 182,678 Turkish pounds is carried forward. It appears from the report that apart from the non-payment of the debts above-mentioned, the provisions of the Decree of Muharrem have been respected. Of the amount required to pay the half-yearly interest on the Unified Bonds only about 15 per cent. was actually expended. This seems to indicate that about 85 per cent. of the bonds are held by subjects of the Allied Powers who cannot cash their coupons.

The receipts of the Debt Administration for 1915-1916 showed a considerable falling off.

London Times, Oct. 3, 1916. Representatives of the Unified Bondholders and others not secured by the Egyptian Tribute have come to an understanding that the permanent occupation of any part of Turkish soil shall carry with it a liability for its proportion of the revenues ceded by the Ottoman Government to the bondholders. There are, it was stated, good precedents both in the case of the Italian and of the Balkan states.

The Balkan wars left Turkish financial responsibilities in a confused state and when the present war broke out a conference was going on in Paris to determine how the revenues of the ceded territory were to be apportioned.

After the war, if the Ottoman Debt Administration continues to collect the ceded revenues it should include a representative of Russia. A more drastic form of control may have to be introduced, extending to the finances generally.

The total war expenditure of Turkey to March 31, 1917, is placed at 132,000,000 Turkish pounds. Since the beginning of the war Turkey has received advances from the Central Powers amounting to 79,000,000 T. pounds, repayable not later than eleven years after the war.

(Statesman's Year Book, 1917, p. 1352.)

Currency. — See Article "Turkey," Encyclopedia Britannica.

The following citations are largely from reports of Americans living in various parts of the Turkish Empire.

"Up to the present war, Turkey had a double standard, with the ratio at 15.0909 to 1.

"During the war, however, she is reported to be introducing a gold standard.

"Currency varies everywhere according to the localities and its use. In the Capital, it is the gold Turkish livre, at Smyrna it is

the silver medjidie, in Syria it is the piastre, in Armenia it is the altilik, at Yemen it is the foreign real. The budgetary and international accounts of the Government are kept in gold piastres and in Turkish livres to 100 gold piastres; but the interior transactions of the Government and of the Administrations are carried on in medjidies (silver of a general value of 20 silver piastres but reduced since 1880 to a legal value of 19 piastres.)

"Foreign moneys are employed in the distant provinces of the Empire; Persian money in Mesopotamia, Indian money on the Persian Gulf, money of the Latin Union in Tripoli, and the Maria-Theresa reals circulate in Arabia almost to the exclusion of Ottoman money." The Ottoman Government has attempted to limit the use of foreign money and its circulation and importation have been prohibited; but the prohibitions are not enforced.

"Paper Money. — Since the war began gold has completely disappeared from circulation. Silver is also disappearing. The shops, instead of change, commonly issue I. O. U.'s to their customers, good in trade. Refusal to accept paper money entails arrest and imprisonment."

"The ability of Turkey to retire its paper money depends on Germany's ability to redeem its bonds in gold."

(Young pp. 1, 13.)

"Turkey has had a very well planned monetary system, practically decimal. The gold lira is divided into 100 piastres and the piastre into 40 paras. Accounts are kept in piastres and paras. The Lira has its subdivisions into coins of appropriate values for convenient trade,— 50 piastres gold, 20 piastres silver, 5 piastres silver, 2 piastres silver, 1 piastre nickel and the fractions of the piastre expressed in paras as ½ piastre 20 paras, ¼ piastre 10 paras. The whole system has been well conceived.

"The great drawback, before the war, to this system was the fact that the various coins were quoted in trade at different piastre and para values in almost every city. For example in one place the Lira would be quoted at 124 piastres and 25 paras, in another 115 piastres, and so on for the different cities and districts. Usually the ratio between the smaller coins and the Lira held the same proportion, but it became very bothersome in passing from place to place to find these different quotations.

"The Government, in all of its dealings, postoffices, taxes, customs, etc., held to the theoretical quotations of the system while in the market the varying system was used. This gave rise to two

systems of quotations, 'Sagh,' or that in use in Government transactions, and 'Chiruk,' or the system of the market.

"Money transactions were further complicated by the use of large quantities of French and English gold, each with its own special quotations and those subject to fluctuations according to bank manipulations or the flow of trade.

"Since the beginning of the war, however, there has been a determined attempt to reduce all trade to the 'Sagh' or government basis. This attempt has been fairly successful and has been welcomed by all.

"But the necessities of war have also required the issuance of paper money. During the past four years 'hard-money' has been practically driven from the market. It is hoarded by individuals, called in by banks, and gathered up by the government for payments abroad. All government payments have been made in paper, at par value. Large quantities have been put into circulation. Presumably the government knows how much, but many even doubt this. The paper has been issued in all denominations, notes of many Liras and also subsidiary paper down to 10 paras (1 cent).

"The paper currency has for its security the promise of the Turkish Government. Past experiences of the people of the country with the government's promises of redemption have been such, however, as to relieve them of all feelings of confidence. The result has been a constant depreciation of paper until, at last reports, the paper Lira was quoted at only 15 piastres gold. Determined attempts have been made by various officials to force up the price of paper. Merchants have been chosen by lot and deported to distant portions of the Empire accompanied with the threat that unless a proper ratio was restored more punishments would follow. In May, 1917, fifteen well known merchants from Beirut, and a like number from Damascus and Aleppo, were deported to Adana. But the efforts have failed to accomplish the desired result.

"The aim of business men is to accumulate as little of the paper as possible and to pass it on as quickly as they can. Taking advantage of the extremities of the people large amounts of real estate have been purchased with this paper money from the small land owners. So the paper has been passed on without any particular stimulation of trade, and with the result that the land is rapidly passing out of the hands of the small owners and being concentrated into the hands of the few.

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"The Redemption of Paper Currency. This problem may be solved by the seemingly simple method of repudiation. But this would not constitute a solution. With all gold driven from the market and only paper money in the hands of the people repudiation would mean the financial ruin of institutions and individuals throughout the land. To be sure this is what most people in Turkey expect if the Turkish Government continues in power. They have no idea that the government paper will ever be redeemed. To make themselves safe as many as possible have been investing their paper either in lands, or paper of European countries, or have been buying up drafts on America from reputable institutions. They prefer to hold American drafts, even for an indefinite period, rather than to be caught with Turkish paper on hand. They know that these American drafts can be realized on when it is all over, whereas the paper of Turkey is a pretty sure loss. It is in this manner that the Treasurers of American Missionary Societies and Colleges have been able to keep themselves supplied with funds. Large amounts of this exchange will be sent to this country as soon as the way is opened.

"But a Reconstructing Government cannot afford to permit the wholesale bankruptcy that would follow the repudiation of all of Turkey's paper money. Some form of redemption, at a fair rate, well distributed over a period of time must be provided for."

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"One of the few benefits that has come to Turkey as a result of its alliance with Germany has been the reorganization of the financial system. The old distinction between gold and silver has been abolished, and all coins now have a fixed value. This is a vast improvement over the old bewildering system of differing local values and ever-changing standards. The gold, however, has disappeared, and the paper money now in circulation has depreciated to one-fifth its face value, and will probably soon be worthless. The people, however, will come out of the war instructed in the value of a uniform monetary system, and will be prepared for the general introduction of the metric system.

"Usury is universally practiced in Turkey; rates of interest vary from 9 to 25 per cent. annually; and legislation should be introduced to control this. A workable system of savings banks is a necessity for the economic development of the people, and especially the savings of women and young girls should be respected and protected."

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"The question of finance has always been complicated by the great diversity in the value of the Turkish Pound at the different cities and towns, and also, as well, by the current use of English and French Pounds, each at its own rate. At the present time we cannot postulate what currency is to be the currency of Mesopotamia, and until that is decided questions of unification and uniform rate are premature. The possibility seems to be that British and British-Indian currency will hold the field, in which case the financial problems will become simplified."

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"The same system prevails in Smyrna as in Constantinople, except that before the war, business was done largely in Chiruk, i. e., rotten piastres, an imaginary unit figuring sometimes as low as 178, but more usually at 182 to the lira. The process in buying was to divide the number of bad piastres by seven and multiply by two to find the number of okterakis or actual coins to be paid. The 80 para piece in Smyrna was used as the unit of figuring in practical affairs more often than the silver piastre or the 40 para piece and the ten para coin in Smyrna was generally called a metallik. On account of the predominance of the Greek population, Greek names were usually used for the coins, e. g., tessaraki and okteraki."

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"The monetary system in use throughout this district (Harpoot) is uniform, the gold lira being worth one hundred and eight piastres silver. The currency is fairly convenient and if government action were taken to reduce the rate of exchange to one hundred piastres instead of one hundred and eight the monetary system would be entirely satisfactory. At present (1917) owing to the extreme inflation of paper currency paper money passes for only about one-fifth of its face value. It would probably take years of education to make the people accept paper currency willingly at face value."

"Much business is done on credit but it is done with the expectation of a large per cent. of loss. Credit as we use the word in this country is a system yet to be built up in Turkey. Capital is very scarce and interest rates are exorbitant. Rates on well secured loans vary from nine to fifteen per cent or even more."

"The Turkish system prevails (in Syria). Until recently there have been two systems of coin values,— the *Sagh* or government value of coins, and the *Chiruk* or market value. This latter has differed in each town. The piastre and para is the basis of computation but each city or district had its own value for each coin. In addition the French and English gold pounds were very common and values were quoted in these foreign pounds as frequently as in Turkish. But since the beginning of the war the *Sagh* value has

become uniform, 100 piastres to the pound and other coins in proper ratio. The finances have become farther involved by the issuance of paper money which is terribly depreciated. Some provision should be made for redemption of this paper or it will mean universal bankruptcy for all business has been carried on in paper since the first year of the war."

(Survey.)

Banking System. — At the close of the Crimean War a British bank was opened in 1856 at Constantinople under the name of the Ottoman Bank, with a capital of L500,000 fully paid up. In 1863 this was merged in an Anglo-French bank, under a concession from the Turkish government, as a state bank under the name of the *Imperial Ottoman Bank,* with a capital of L2,700,000, increased in 1865 to L4,050,000 and in 1875 to L10,000,000 one-half of which is paid up. The original concession to the year 1893 was in 1875 extended to 1913, and in 1895 to 1925. The bank acts as banker to the government, for which it has a fixed annual commission, and it is obliged to make a permanent statutory advance to the government of LT1,000,000 against the deposit by the government of marketable securities bearing interest at a rate agreed upon. The bank has the exclusive privilege of issuing bank notes payable in gold. Its central office is in Constantinople, and it is managed by a director-general and advisory committee appointed by committees in London and Paris.

The National Bank of Turkey (a limited Ottoman Company) is a purely British concern with a capital of L1,000,000, founded by imperial firman of the 11th of April, 1909, under the auspices of Sir Ernest Cassel. It is understood that it was originated at the unofficial instigation of both the British and Ottoman governments, with the idea of forming a channel for the more generous investment of British capital in Turkey under the new regime, so that British financial interests might play a more important part in the Ottoman Empire than has been the case since the state bankruptcy of 1876. This bank brought out the Constantinople municipal loan of 1909 (L1,000,000). Other banks doing business in Constantinople are the *Deutsche Bank,* the *Deutsche-Orient Bank,* the *Credit Lyonnaise,* the *Wiener Bank-Verein,* the *Russian Bank for Commerce and Industry,* the *Bank of Mitylene,* the *Bank of Salonica* and the *Bank of Athens.*

(Encyclopedia Britannica: Eleventh Edition: Article " Turkey.")

The Imperial Ottoman Bank was founded in 1856; became a State bank in 1863; present concession extends to 1925.

Powers.— The Committee has most extensive powers, not only over the organization and personnel of the Council, but also over the financial operations of the Bank. It can delegate its powers to a sub-committee — 8 members, 4 French, 4 English.

General Assembly.— Represents share-holders and is composed of all share-holders holding at least 30 shares. Meets annually. Hears the report of the Committee, discusses, approves, or rejects the accounts, fixes the dividend, names members of the Committee, and deliberates on propositions submitted to it by the Committee.

Profits.— Division of profits takes place annually.

1. 5 per cent. of the capital on account of the payment of the dividends.
2. 10 per cent. of the profits for the reserve funds.

The surplus is divided:

9/10 to the share-holders,
1/20 to the fondateurs,
1/20 to the members of the Committee and of the Council of Administration.

(Young p. 25.)

" It continues to enjoy its monopoly of emission of paper money and to exercise the functions of Treasurer paymaster-general of the Empire. It enjoys also a right of preference over every other bank in any negotiation for a public loan. It has a right to establish branches in the interior or in foreign countries according to need. It is, in a word, the only financial agent recognized by the Government and has the right to exercise, besides its functions as State Bank, all the operations of a commercial bank . . . "

It had in 1906 twenty-nine interior branch banks and two foreign.

Organization and administration:

Council of Administration

7 members

4 Directors and 3 Administrators

All named by a Committee sitting at London or Paris composed of 26 members.

10 English
10 French
6 Austrian

The three Administrators, residing at Constantinople, must be approved by the Government. One of the Directors receives the title of Director-General and presides at meetings of the Council.

Powers:

"The Committee has all power to guide, control and supervise all the operations of the Bank.

"The duties and powers of the Council of Administration, sitting at Constantinople, are defined by the Committee . . ."

The Committee:

26 members

All named by the General Assembly for terms of five years.

Elected five each year, and in one year six.

Each member of the Council and of the Committee must make a deposit of 100 shares.

New Ottoman National Credit Bank.— According to the London Times, the New Ottoman National Credit Bank has a capital of 4,000,000T. pounds. After the expiration of the privileges of the Imperial Ottoman Bank the new institution is to become the State Bank with the right to issue bank-notes.

(London Times, Jan. 13, 1917.)

Bank of Agriculture.— Law of 1898. Chapter 1, "The Agricultural Bank is founded:

1. To lend . . . money to cultivators against pledges of salable objects or against tender of a serious guarantee.
2. To receive interest-bearing funds.
3. To serve, finally, as intermediary in financial operations concerning agriculture which it must encourage. Only, it is stipulated that the total of interest-bearing sums received by the Bank in the space of a year must not exceed one-half of the amount of capital disposable at the commencement of that same year."

Directed by the Minister of Commerce and Public Works.

Its lending operations:

Chapter vi. "The Agricultural Bank lends money in two different ways:

1. It lends for a period of one to ten years, on condition of repayment, each year, of a sum sufficient to cover the interest as well as the amortisement of the debt.

2. It lends for a period of 3 months to a year, on condition of repayment, when due, of both the capital and the interest or of only the capital, the interest being repaid in graded payments. Payment of a debt contracted from the Bank must always be in cash."

It is strictly prohibited to lend money to persons who are not cultivators.

(Young p. 342.)

The loaning of money, on real estate security, at usurous rates of interest is reported from all sections of the Empire. Interest rates of from 12 per cent. to 25 per cent. are the common thing. It is generally considered that borrowing money on land is equivalent to a sale, for the paying of interest is practically impossible, and woe to the one who gets into the hands of the money lender.

There is, therefore, the problem of the suppression of usury by proper legislation and by the establishment of peoples banks. These would encourage thrift by the accumulation of savings and would furnish a place where loans could be made at reasonable rates.

(Survey.)

Weights and Measures. "There is no uniform system of weights and measures in common use throughout the Turkish Empire. The Government in all of its transactions employs the Metric System and so the people of the country are somewhat familiar with this system. But in the markets each town and city has its own stones and pieces of iron that are recognized in that one locality while another set of stones and irons prevails elsewhere. There is no one set of names of weights and measures common to the country, or even to one part of the country. In some places, also, there is one set of weights to buy with and another set to sell with.

"With this lack of system prevailing throughout the Empire it is easy to see that here is one of the problems of Reconstruction. Trade becomes a mere unseemly bargaining when there are no standards to which appeal can be made.

"The remedy is manifestly along the line already adopted, that of the Metric System. Not only should the Government use this system in its own transactions, but it should make determined efforts to put the system into common use in the market. It is true that common weights and measures that the people have made use of generation upon generation are very reluctantly parted with. And the change will come about slowly in the country places. But there will never be another such opportunity as when all the lines of government and trade are being reorganized.

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"The usual Turkish system of weights and measures is used in Smyrna; foreigners often use the French kilo system, and the English system is also employed; so that the educated person finds it necessary to be able to work his problems in all three systems.

"The system of weights and measures (in Harpoot) is in an entirely chaotic condition. The obvious remedy is near at hand as the metric system is pretty generally known, is used in all government contracts and in many other lines of business and if made compulsory would soon become universal as there is no other coherent system to stand out against the manifestly superior metric system."

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"These, too, vary according to the district. The rotl of Beirut is quite different from the rotl of Aleppo. There seem to be no standardized weights and measures. And purchasers in the shops are quite dependent on the shop keeper's honesty, for usually his weights consist of pieces of scrap iron or bits of broken stones. One thing is quite uniform, however, and that is the selling of all commodities by weight rather than by measure,—grain, vegetables, fruit, charcoal, all are by weight."

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"The yet more diversified and complicated systems of weights and measures (in Mesopotamia) are a great hindrance to the prosecution of honest trade, and all attempts of the Turkish Government to introduce the metric system throughout the region proved an expensive failure. Almost every village has its own standard stones, no two of which are exactly alike; and the merchants of the towns and cities buy with one system of weights and measures and sell with another and smaller system.

"The definite introduction of the metric system of weights and measures throughout the whole extent of Mesopotamia would not only be a great practical gain to all dealers, but would constitute a moral reformation in the commercial life of that country. Let there be an insistence upon a universal and exclusive use of the metric system of weights and measures throughout the whole of Mesopotamia."

(Survey.)

Land Tenure. See Article "Turkey," Encyclopedia Britannica.

"By the Turkish law of 1869 foreign subjects were for the first time permitted to hold land in Turkey. The condition, however, was attached that they should be assimilated to Turkish subjects in everything regarding the ownership of such property."

(Pears: Abdul Hamid, p. 121.)

When, as is often the case, several hundred persons have shares in a plot of land, and their lots are not in any way apportioned, it is evident that it is no one's business to see that the land is properly cultivated, and it falls into inevitable neglect. This disadvantage is especially seen in connection with the extensive olive plantations near Lydda and Ramleh.

(Gt. Brit. Dipl. and Cons. Repts. Ann. Ser. 1913. No. 5107. p. 10.)

With reference to the ownership of land, it is deserving of mention that Turkey has preserved the old Byzantine system of registration of titles. No private papers between parties prove the validity of titles to land. The true Title Deed, or *Hodjet,* is the entry in the official Register of Transfer, or a certified copy of such entry. The system, which is still in force, is simple and effectual, the buyer and seller present themselves before the Land Court which causes search to be made in the Register for the last transfer of the property in question. If it be found inscribed in the name of the person who presents himself as seller, he is asked after proving his identity whether he has sold the property in question, and if so, to whom, and for what sum. The buyer is then asked whether he has bought it and whether he has paid the price. Upon his answering and upon the seller stating that he has received payment, an entry is carefully made in the land Register, which is read over to both parties, signed by them, and their signature is witnessed by half a dozen prominent members of the Court. (Pears: Abdul Hamid p. 28.)

" The war has brought such privation that a large percentage of the people have been obliged to borrow money on their houses and lands at rates that are simply impossible. The result is that a few rich have been able to gather in most of the land at prices far below their real value. The Lebanon Mountains district was made up of small land owners. This will no longer be true unless some equitable system of redemption is established whereby the avaricious land grabber may be made to disgorge and the former land owner who has been obliged to mortgage or sell because of the stress of war may have an opportunity to redeem his land at reasonable and possible rates."

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" As already pointed out those fortunate enough to have money, have, in many cases, taken advantage of the terrible condition of the people and have bought in lands at a mere fraction of their

values. Through the Lebanon Mountains, for example, there were, before the war, a great many small land owners. But the famine has been so severe and has reached such classes of the people that they have been obliged to sell everything they possessed in order to obtain the bare necessities of life. Certain men have used this opportunity to possess themselves of large tracts of land, paying in paper, and not at any where near a fair value. In other districts where deportations have taken place property has been seized and sold by the government or has merely been appropriated by those not deported.

" A bureau should be opened by the Reconstruction Government to investigate such cases and to supervise the redemption of lands at a fair rate. This should be done, not only for the purpose of doing justice where distinct usury has been practiced, but also to aid in the return of land to small ownerships rather than leaving it in the hands of the few.

" Probably nothing that could be done would go farther to gain the good will of the people and demonstrate to them that justice and fair play were to be the watchwords of the Reconstructing Government."

(Survey.)

Railways. — This subject is treated in the chapter in this volume entitled, " *Transportation.*"

See also "*Railways*" in the article on "Turkey" in the Encyclopedia Britannica, Eleventh Edition.

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